



What is the Toxics Release Inventory? (TRI)





Let's Watch a Short Video

EPCRA – The Community Right to Know Act



Key questions that TRI can answer:



*Are industries in my town **increasing** or **reducing** the amount of chemicals they release to the environment?*



*What are the **top chemicals released** in my town?
How much is being released and **by whom**?*



*Does the factory near my daughter's school release **toxic chemicals**?*

EPA's Toxics Release Inventory (TRI)
can help you find the answers.



What is the Toxics Release Inventory (TRI)?

- TRI is an EPA information resource that can help communities learn about toxic chemical releases from certain industrial facilities **in their neighborhood**.
- TRI includes data about approximately **21,000 facilities** across the country and covers **more than 675 toxic chemicals**.
- **TRI can tell you about:**



Releases



Waste transfers



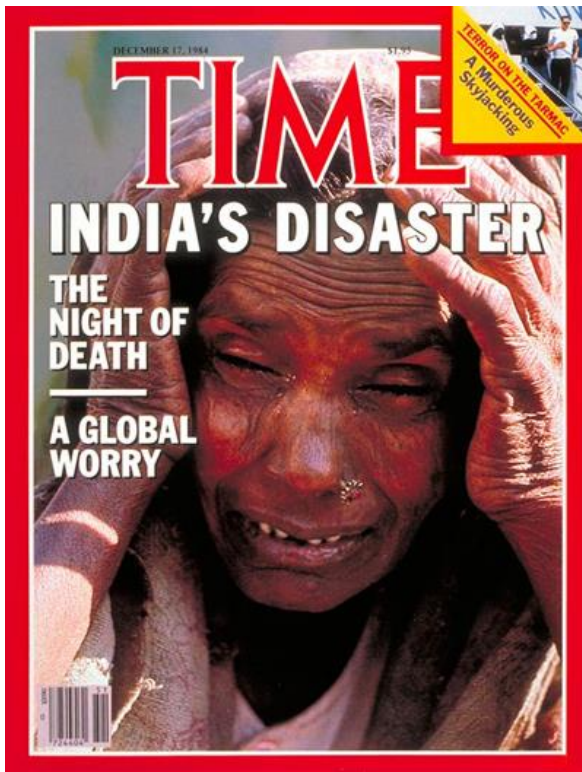
Recycling



Pollution prevention

And much more!!!

Why was the Toxics Release Inventory created?



December 2-3, 1984

Bhopal, India methyl isocyanate gas disaster:

- ❖ More than 2,200 dead
- ❖ Approximately 15,000 more people have died since the accident due to long-term health effects.
- ❖ More than 150,000 people were treated at hospitals and clinics in Bhopal and surrounding communities.

Toxics Release Inventory (TRI)

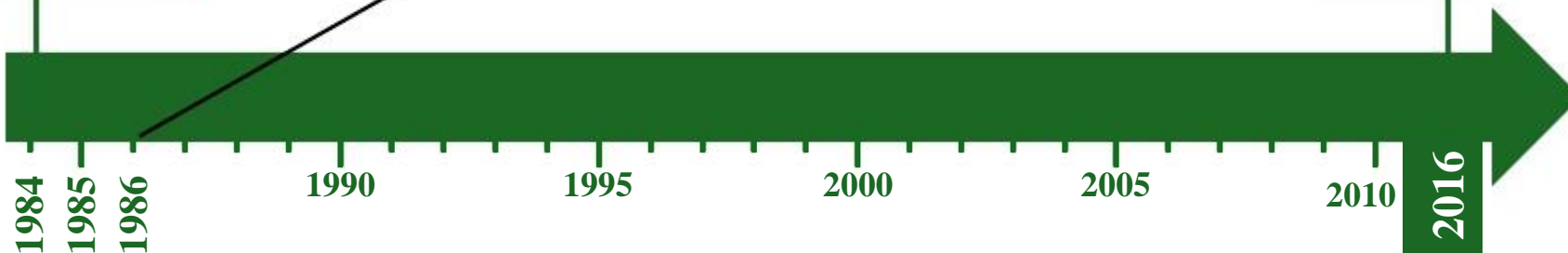


Time Line - Toxics Chemical Release Inventory

Bhopal, India release



1986 Congress passed
the EPCRA law



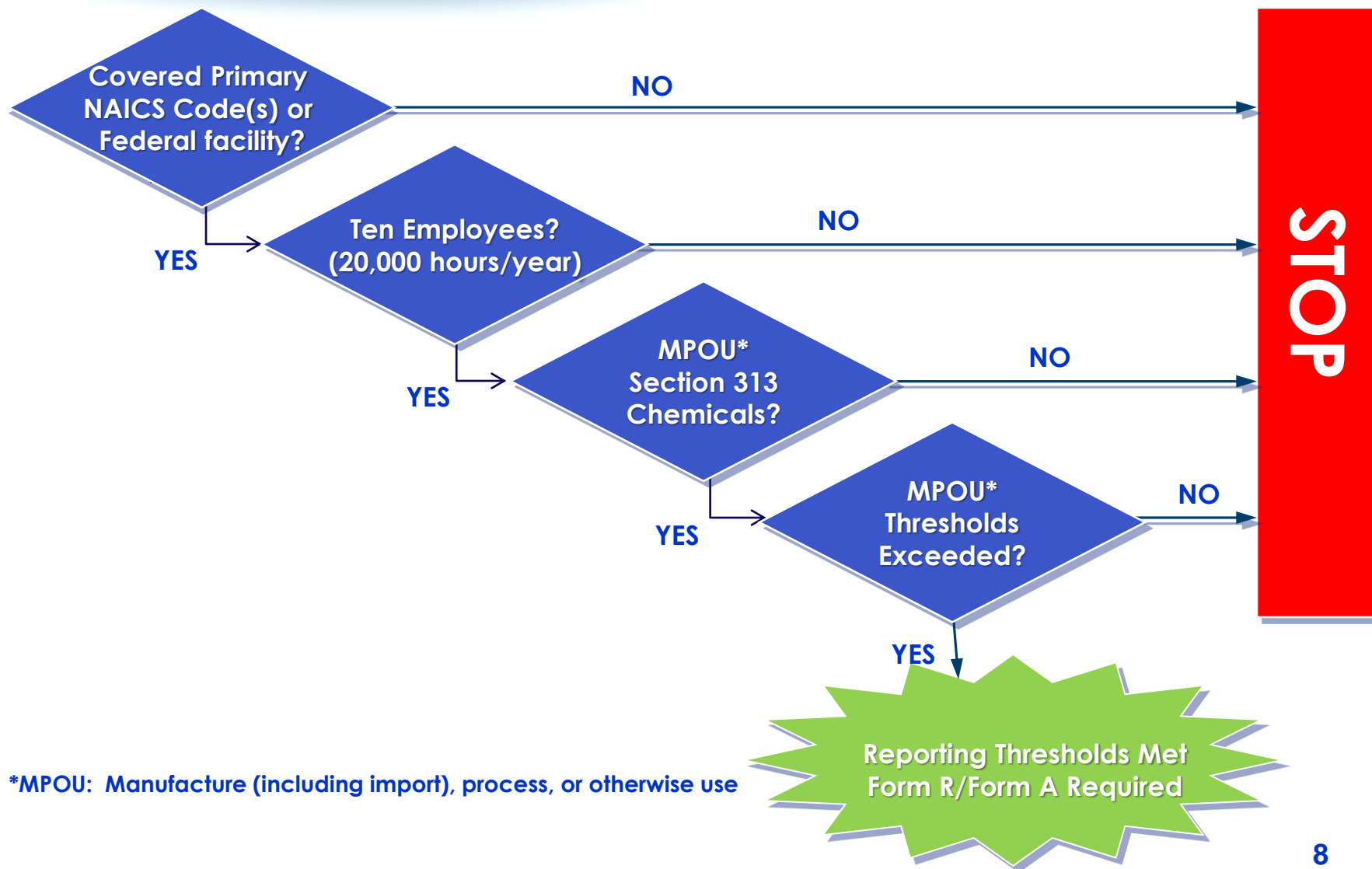
Institute,
West Virginia
release

**“Emergency Planning and
Community Right to Know Act”**



- ❖ **Emergency planning (Section 301-303)**
 - **Development of Emergency Response Plans**
 - **Local Emergency Planning Committees (LEPC)**
 - **State Emergency Response Commission (SERC)**
- ❖ **Emergency release notification (Section 304)**
 - **Facilities must immediately report release into the environment of an extremely hazardous substance at or over reportable quantity**
- ❖ **Hazardous chemical storage reporting (Sections 311-312)**
 - **Facilities provide information on chemical quantity stored to the SERC, LEPC, and local fire department.**
- ❖ **Toxic Chemical Release Inventory “TRI” (Section 313)**
 - **Regulated facilities provide release and waste management information for over 650 chemicals**

Who Needs to Report to TRI?





What information is Reported to TRI?

- ❖ **On-site** (at facility) **releases of TRI chemicals to:**
 - Air, Water, Land (e.g. landfills) and Underground Injection
- ❖ **Off-site transfers**
 - Transfers of toxic chemical wastes to disposal sites
- ❖ **Other waste management**
 - Recycling
 - Treatment
 - Energy Recovery
- ❖ **Pollution Prevention Activities**





Which facilities must report to TRI?

Facility must be in a **TRI-covered industry sector**, including:



Manufacturing



**Coal/Oil
Electricity
Generation**



**Certain Mining
Facilities**



**Hazardous
Waste
Management**



Federal Facilities

- Facility must have the equivalent of at least **10 full-time employees**.
- Facility must manufacture, process or use more than a **certain amount of a TRI-listed toxic chemical per year**.

Industrial Sectors Covered

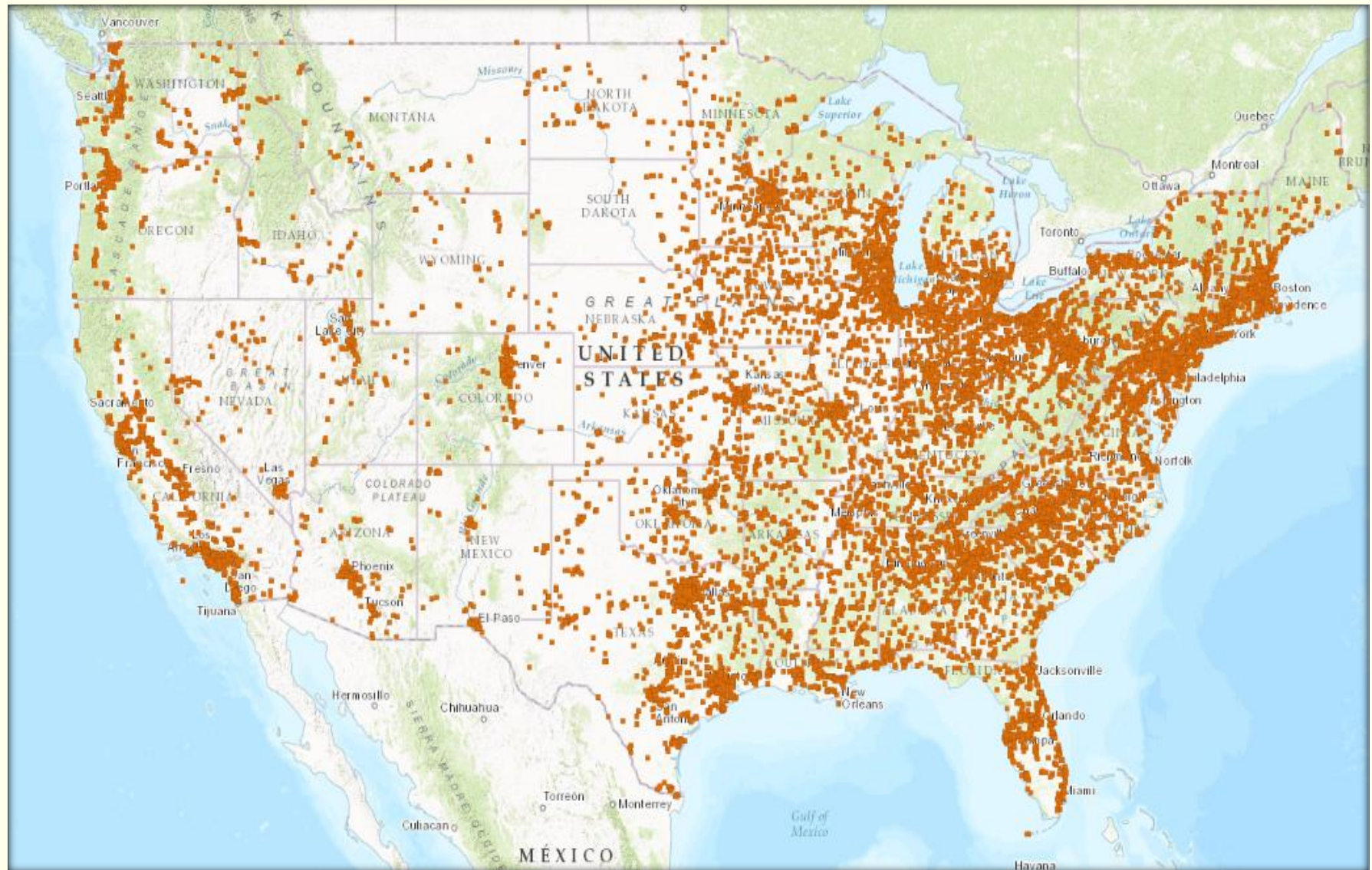


Industrial Sector	Notes
Manufacturing	Facilities engaged in the mechanical or chemical transformation of materials or substances into new products
Metal mining	Not including metal mining services, and uranium, radium, and vanadium ores
Coal mining	Not including coal mining services
Electrical utilities	Limited to facilities that combust coal and/or oil for the purpose of generating electricity for distribution in commerce
Treatment, Storage, and Disposal facilities	Limited to facilities regulated under the Resource Conservation and Recovery Act, Subtitle C, 42 U.S.C. Section 6921 et seq.
Solvent recovery services	Limited to facilities primarily engaged in solvent recovery services on a contract or fee basis
Chemical distributors	Facilities engaged in the wholesale distribution of chemicals and allied products
Petroleum bulk terminals	Facilities engaged in the wholesale distribution of crude petroleum and petroleum products from bulk liquid storage facilities
Federal facilities	Federal facilities (covered by Executive Order 13423)



Let's Watch a Short Video The TRI National Analysis

Geographic Distribution of TRI-Reporting Facilities in 2016



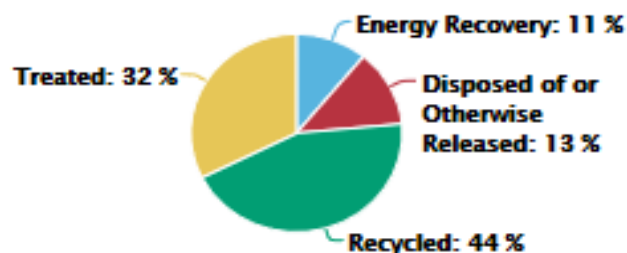
USA

2016 TRI Quick Facts

- 21,629 facilities reported to TRI for 2016
- Most releases were to land, primarily from metal mining operations
- Since 2006, releases decreased by 21%

Production-Related Waste Managed, 2016

27.80 billion pounds



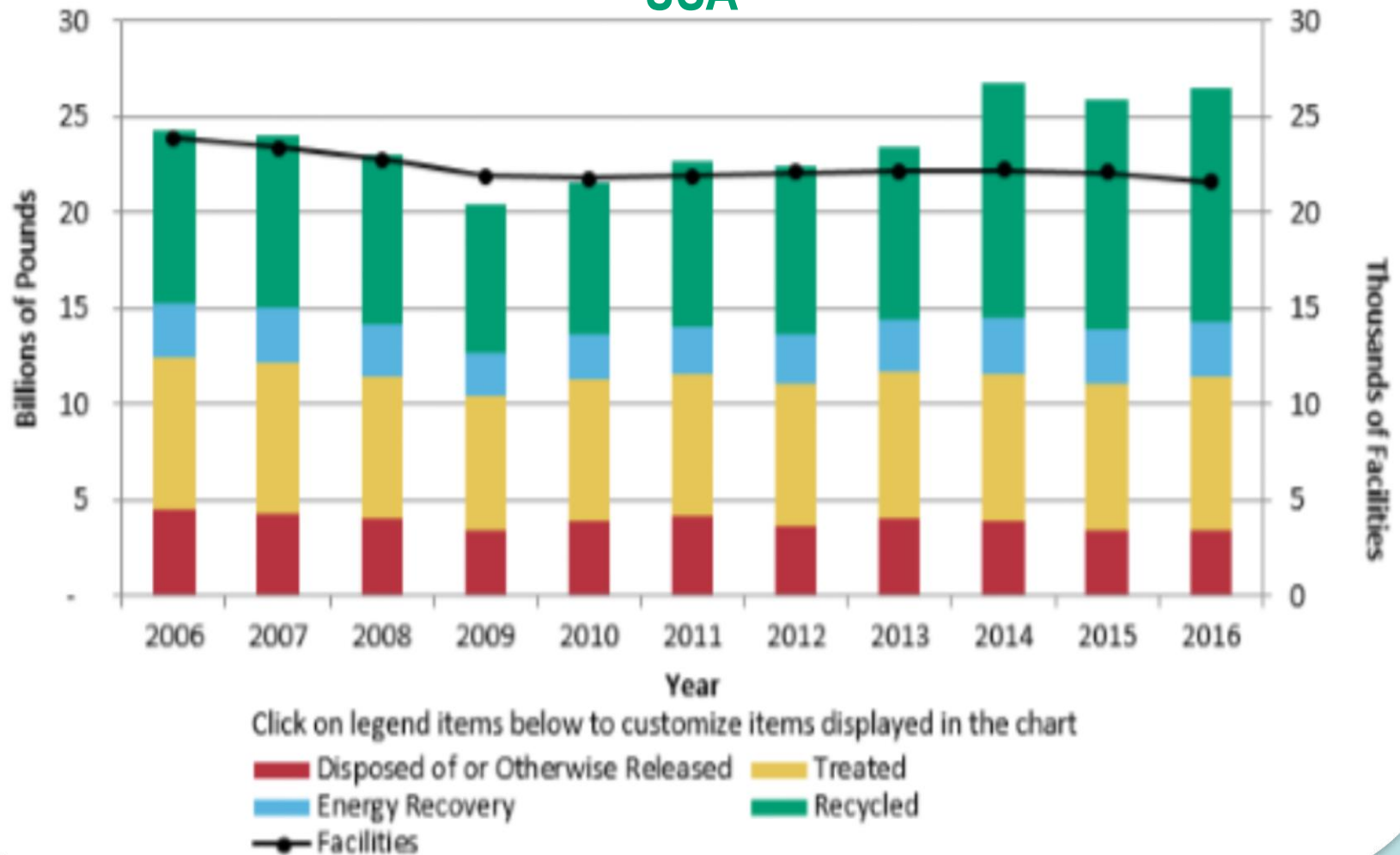
Quick Facts for 2016

USA

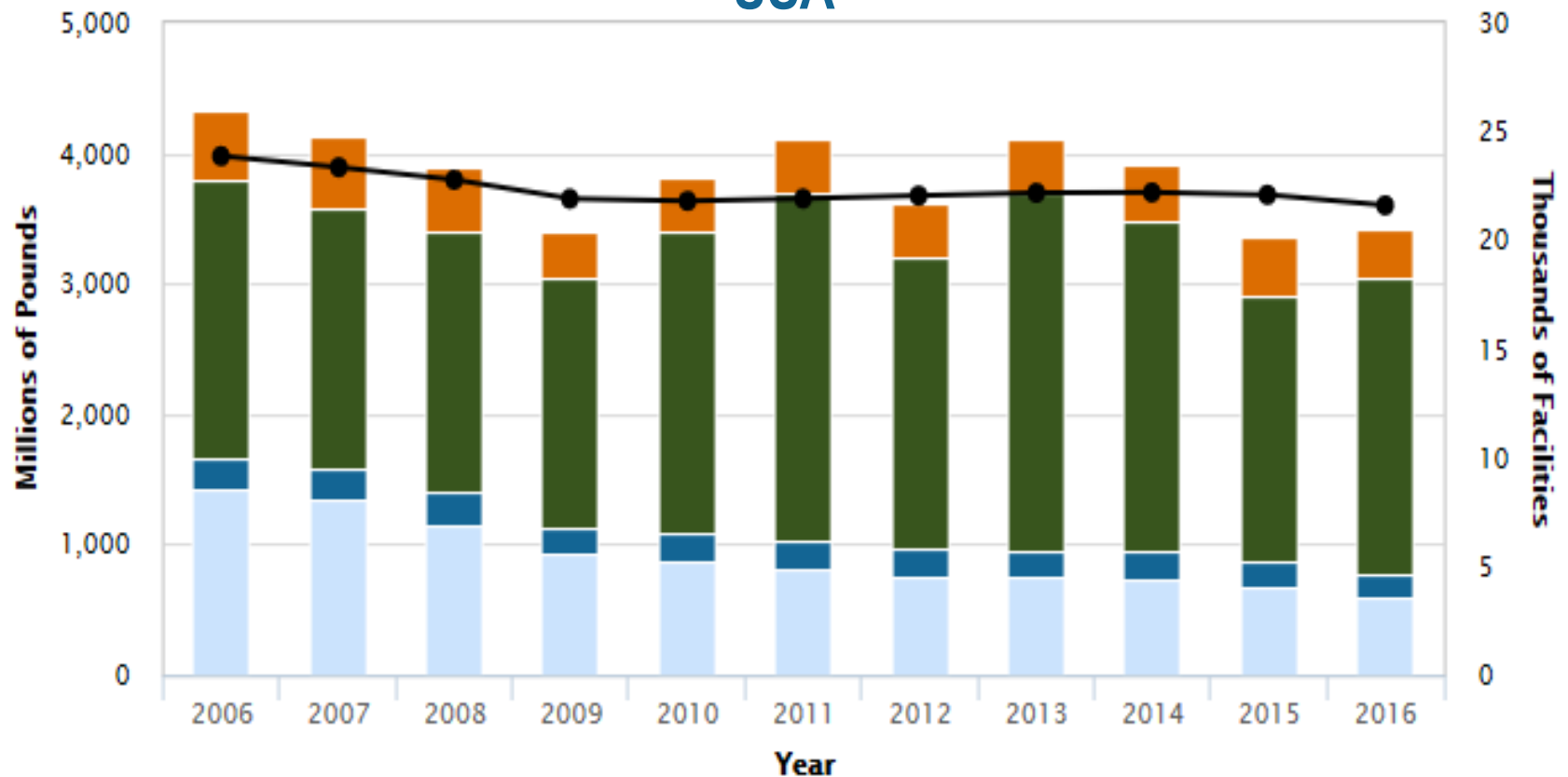
<i>Measure</i>	<i>Value</i>
Number of TRI Facilities	21,629
Production-Related Waste Managed	27.80 billion lb
Recycled	12.25 billion lb
Energy Recovery	3.04 billion lb
Treated	9.01 billion lb
Disposed of or Otherwise Released	3.51 billion lb
Total Disposal or Other Releases	3.44 billion lb
On-site	3.08 billion lb
Air	0.61 billion lb
Water	0.19 billion lb
Land	2.28 billion lb
Off-site	0.37 billion lb

Note: Numbers do not sum exactly due to rounding.

Production-Related Waste Managed USA



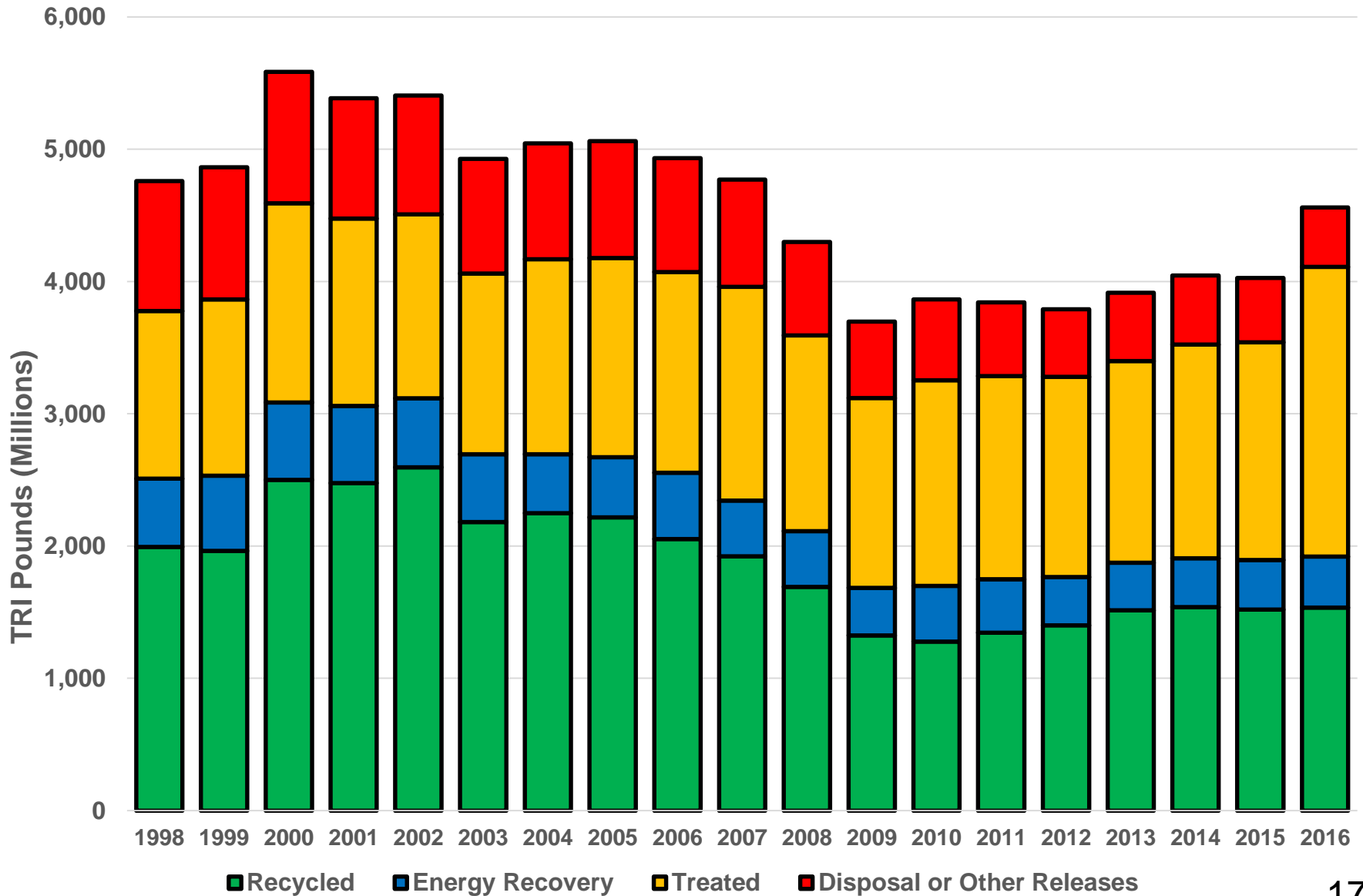
Total Disposal or Other Releases USA



Click on legend items below to customize items displayed in the chart

- Off-site Disposal or Other Releases
- On-site Land Disposal
- On-site Surface Water Discharges
- On-site Air Releases
- Reporting Facilities

1998-2016 Region 4 Total TRI Waste Managed



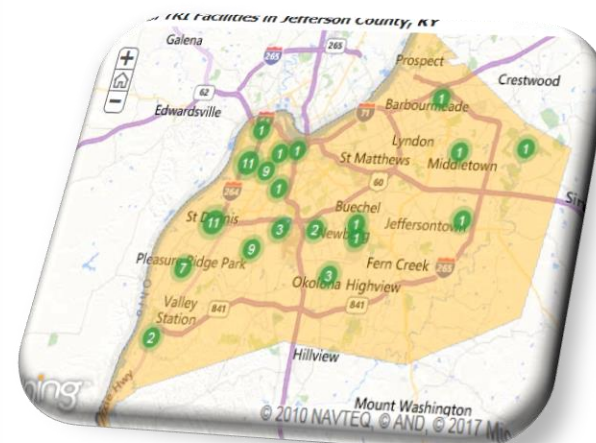
2016 TRI Factsheet



Quick Facts for 2016

	Jefferson County, KY
Number of TRI Facilities:	65
Total Production-Related Waste Managed:	85.6 million lbs
Total On-site and Off-site Disposal or Other Releases:	4.6 million lbs
Total On-site:	3.8 million lbs
• Air:	3.1 million lbs
• Water:	104.3 thousand lbs
• Land:	524.1 thousand lbs
Total Off-Site:	868.1 thousand lbs

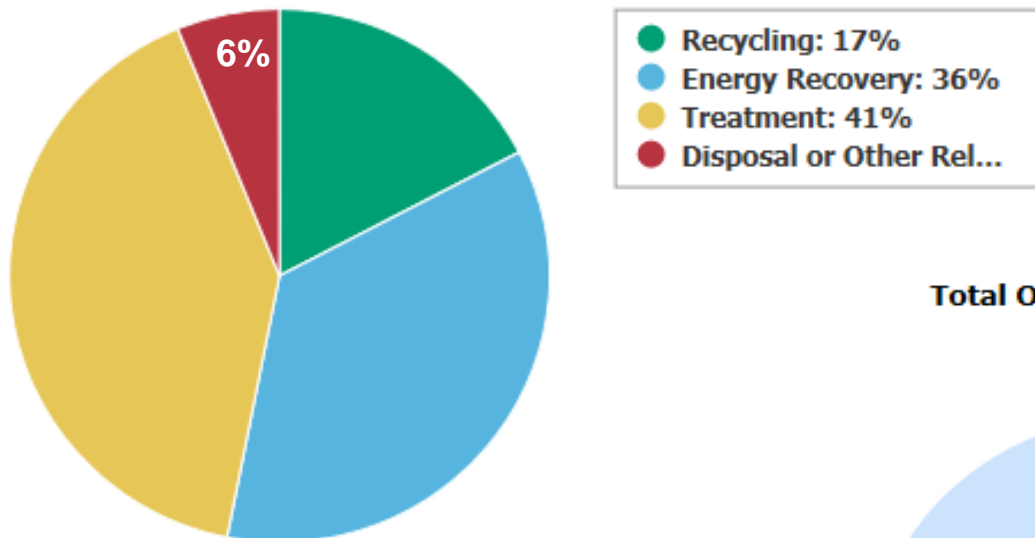
Jefferson County, KY



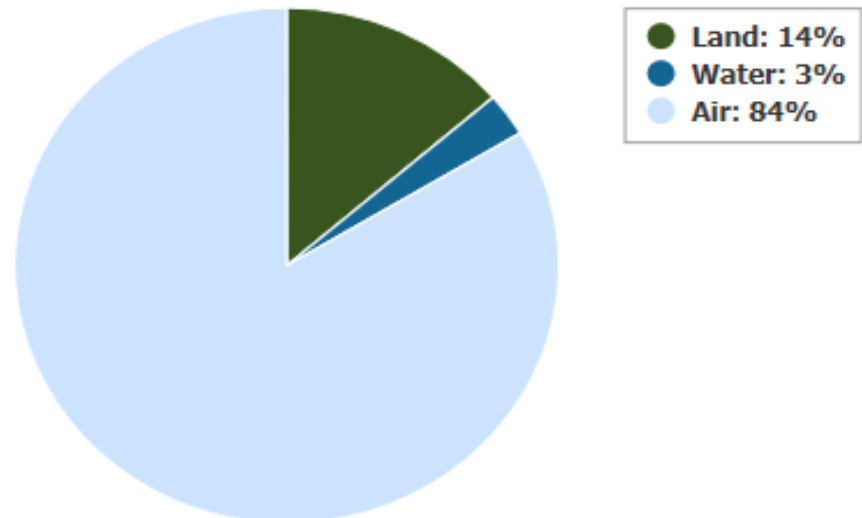
Jefferson County, KY



**Production-related waste managed in
Jefferson County, KY, 2016**
85.6 million pounds



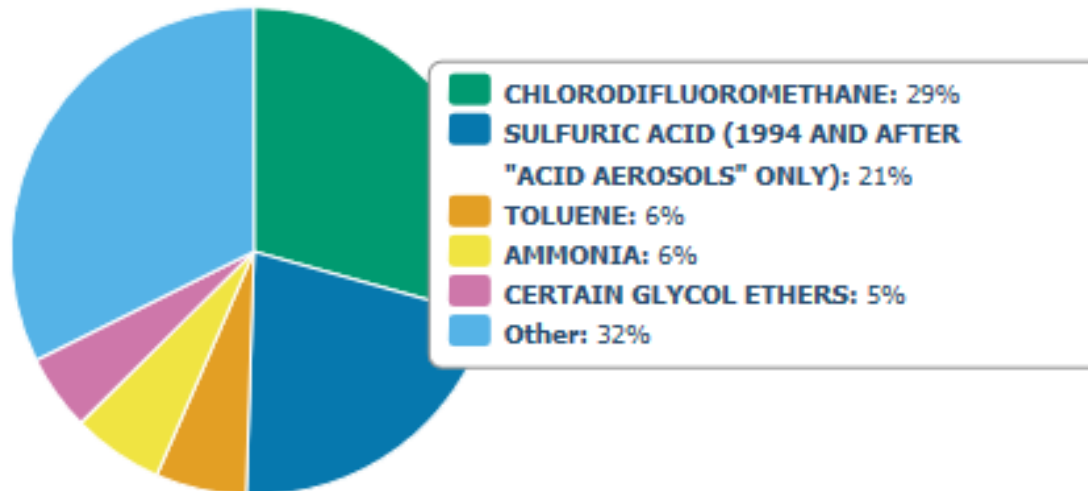
Total On-Site Releases by Environmental Medium
Jefferson County, KY, 2016
3.8 million pounds



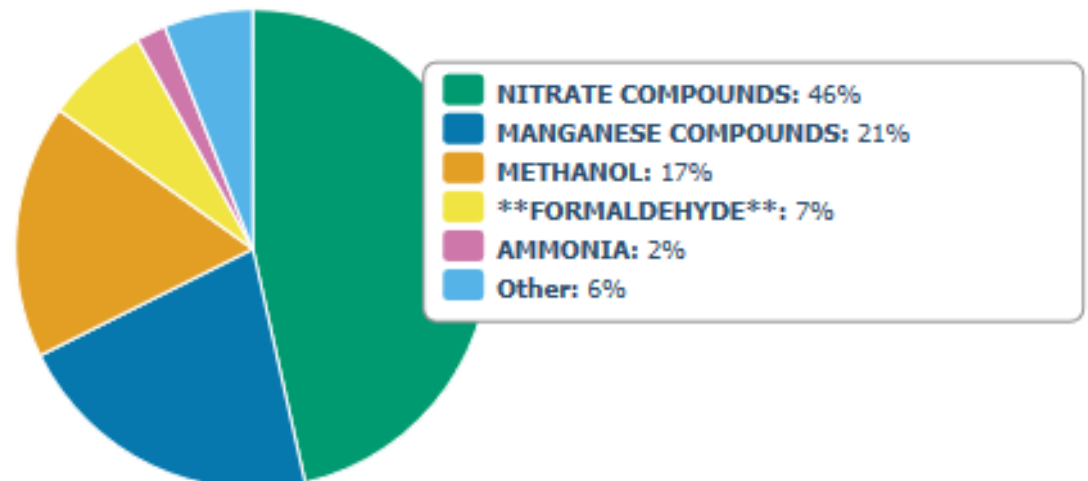
Top Five Chemicals Released to Air and Water

Jefferson County, KY, 2016

AIR 3.1 million pounds

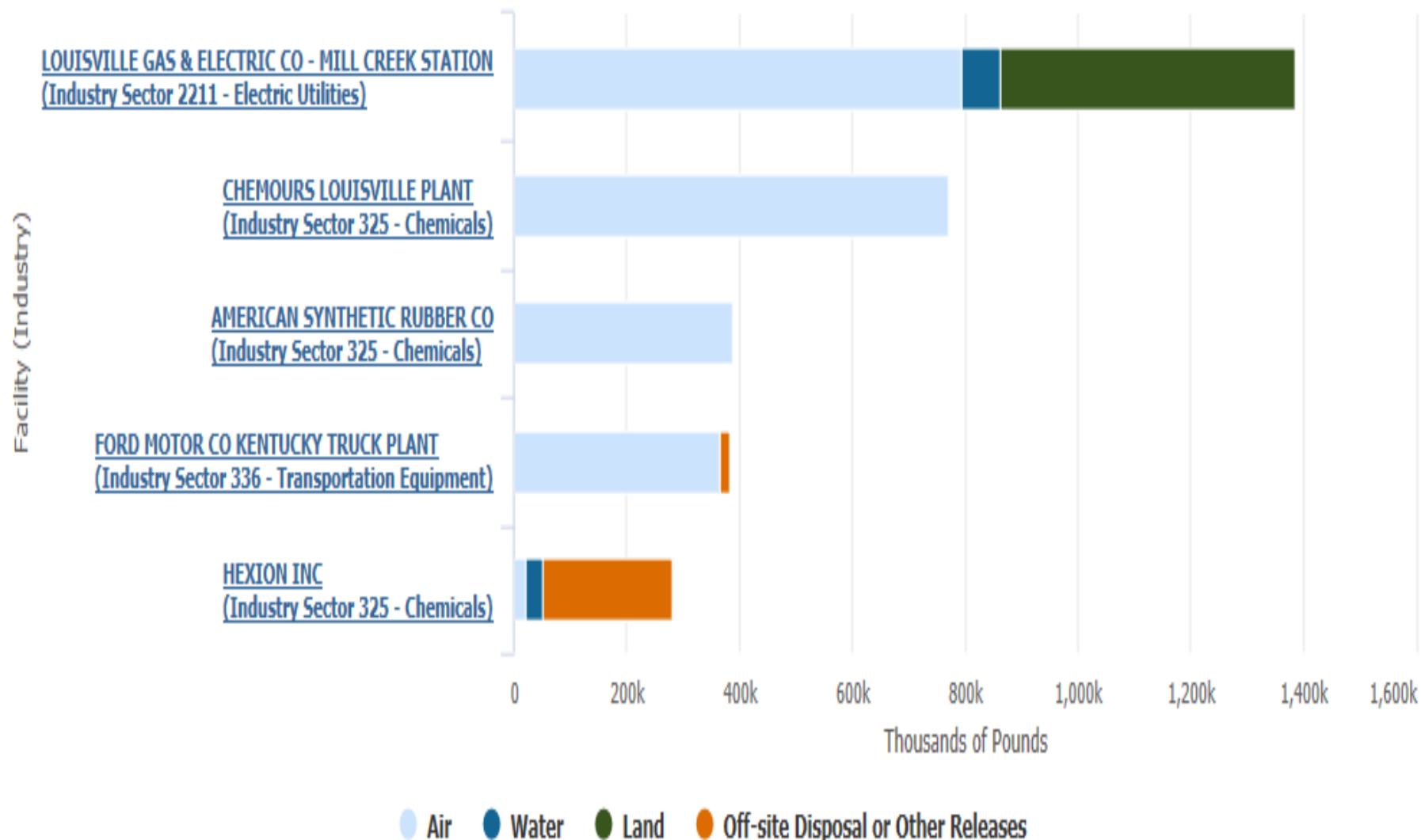


WATER 104.3 thousand pounds



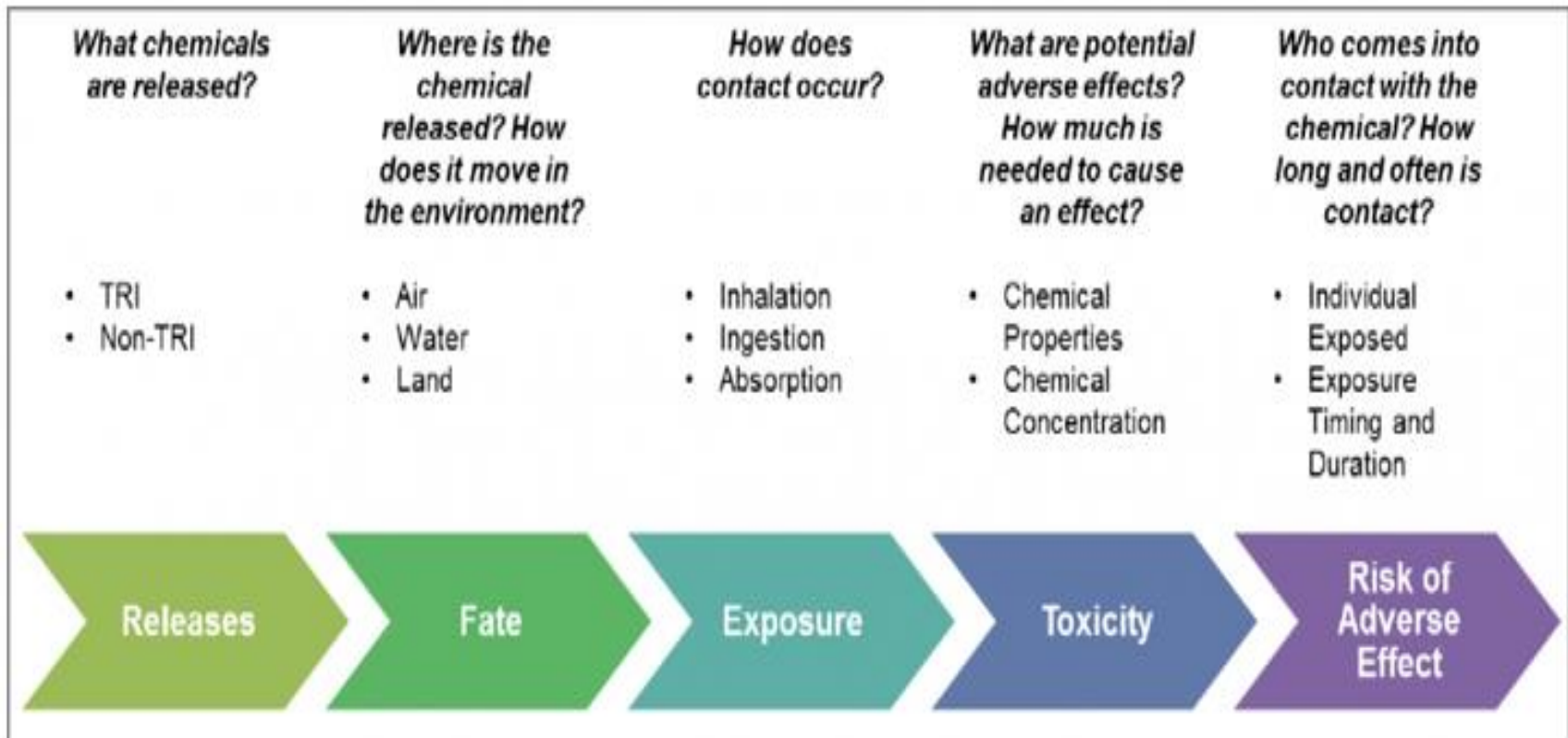
Note: **=Carcinogenic Chemical

Top Five Facilities by Total Disposal or Other Releases Jefferson County, KY, 2016





RSEI adds important information about relative potential for risk, but it can't determine individual exposure or actual risk.



Overview of Factors that Influence Risk

Risk Screening Environmental Indicator

(RSEI) Incorporates:

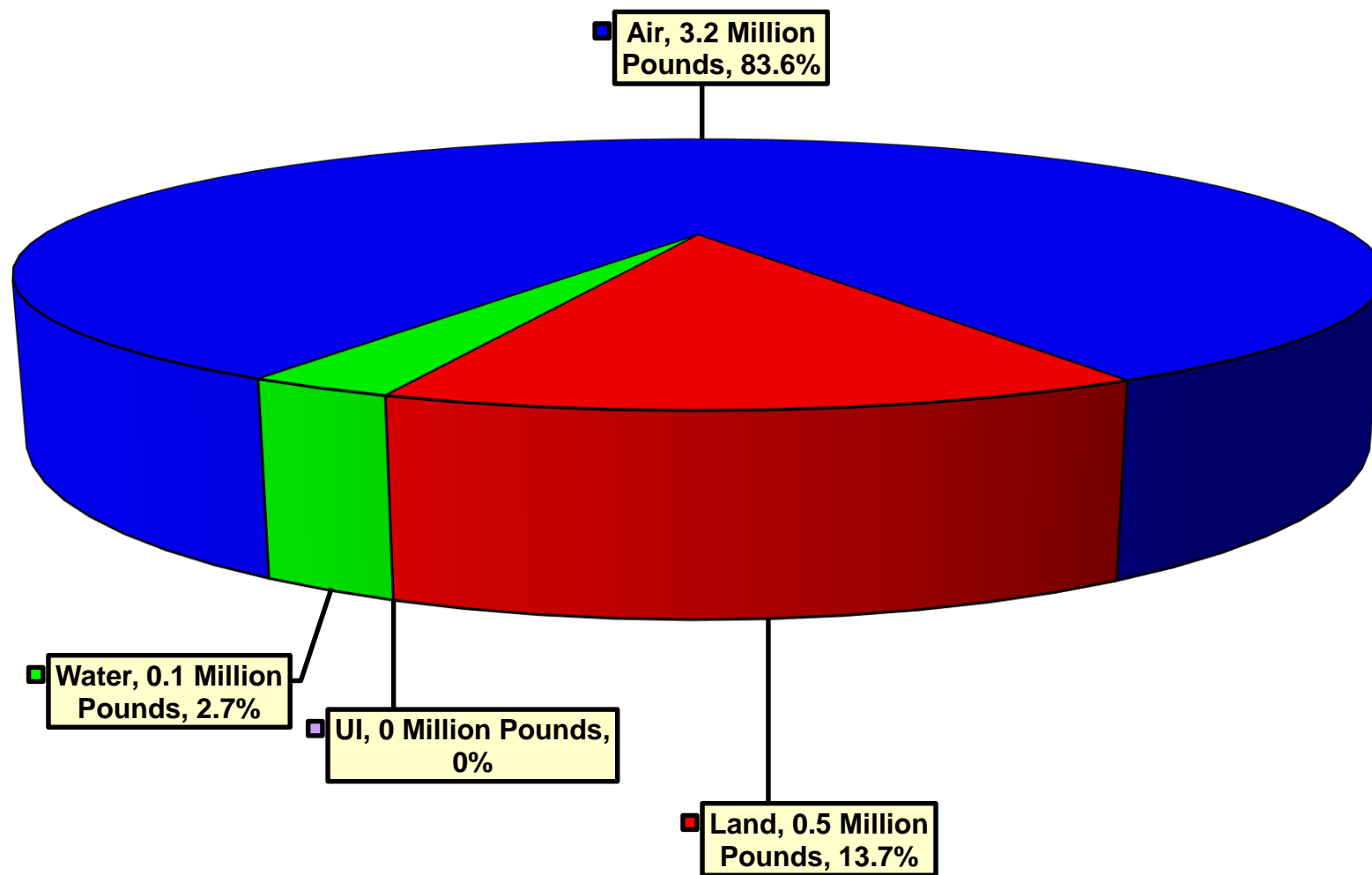


- ❑ Amount of chemical released
- ❑ Toxicity of the chemical
- ❑ Fate and transport of the chemical
- ❑ Route and extent of human exposure
- ❑ Number of people affected

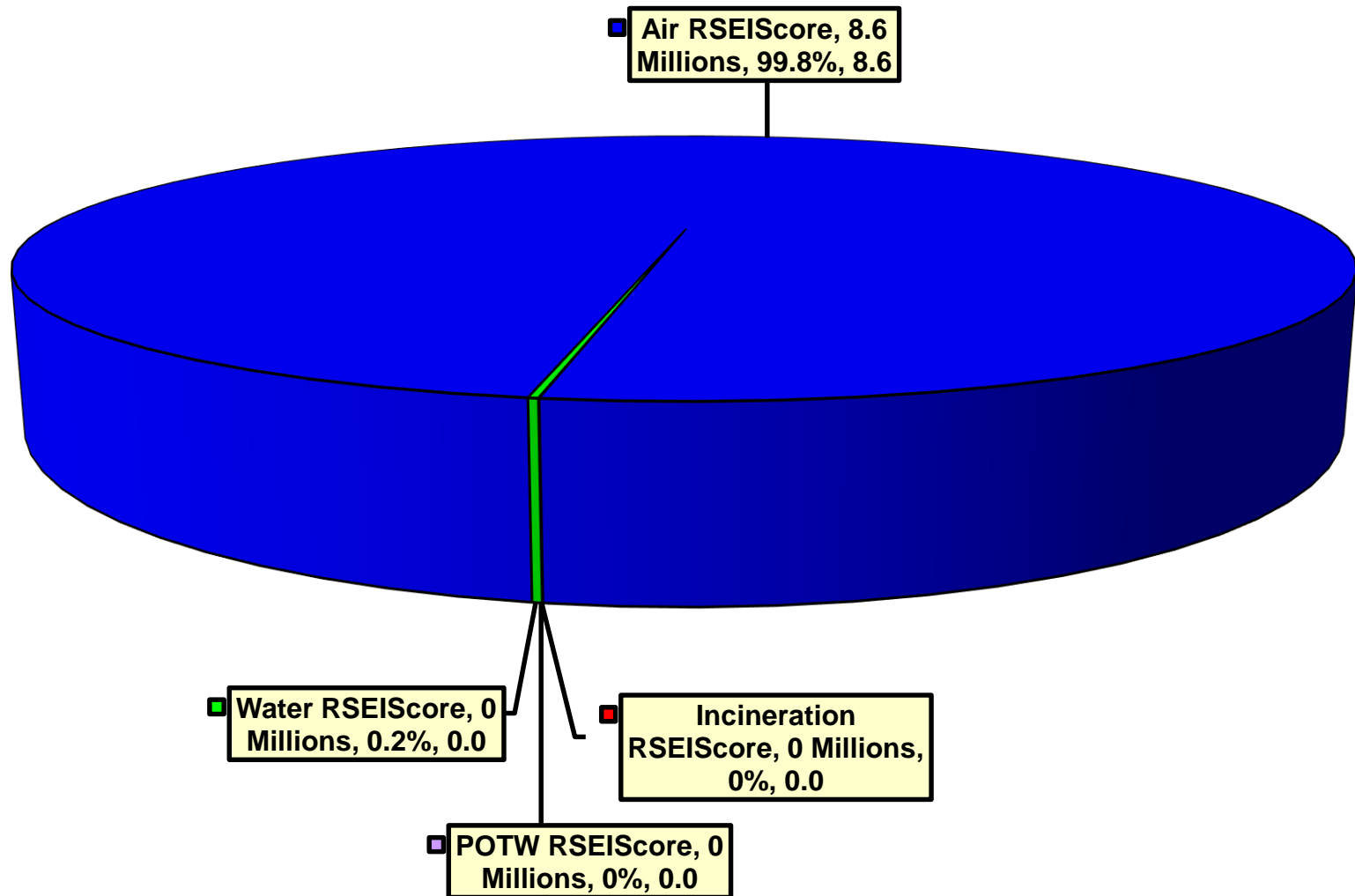
RSEI is not a formal risk assessment!

- it does not estimate actual risk to individuals**
- results are for comparative purposes and only meaningful when compared to other scores produced by RSEI.**

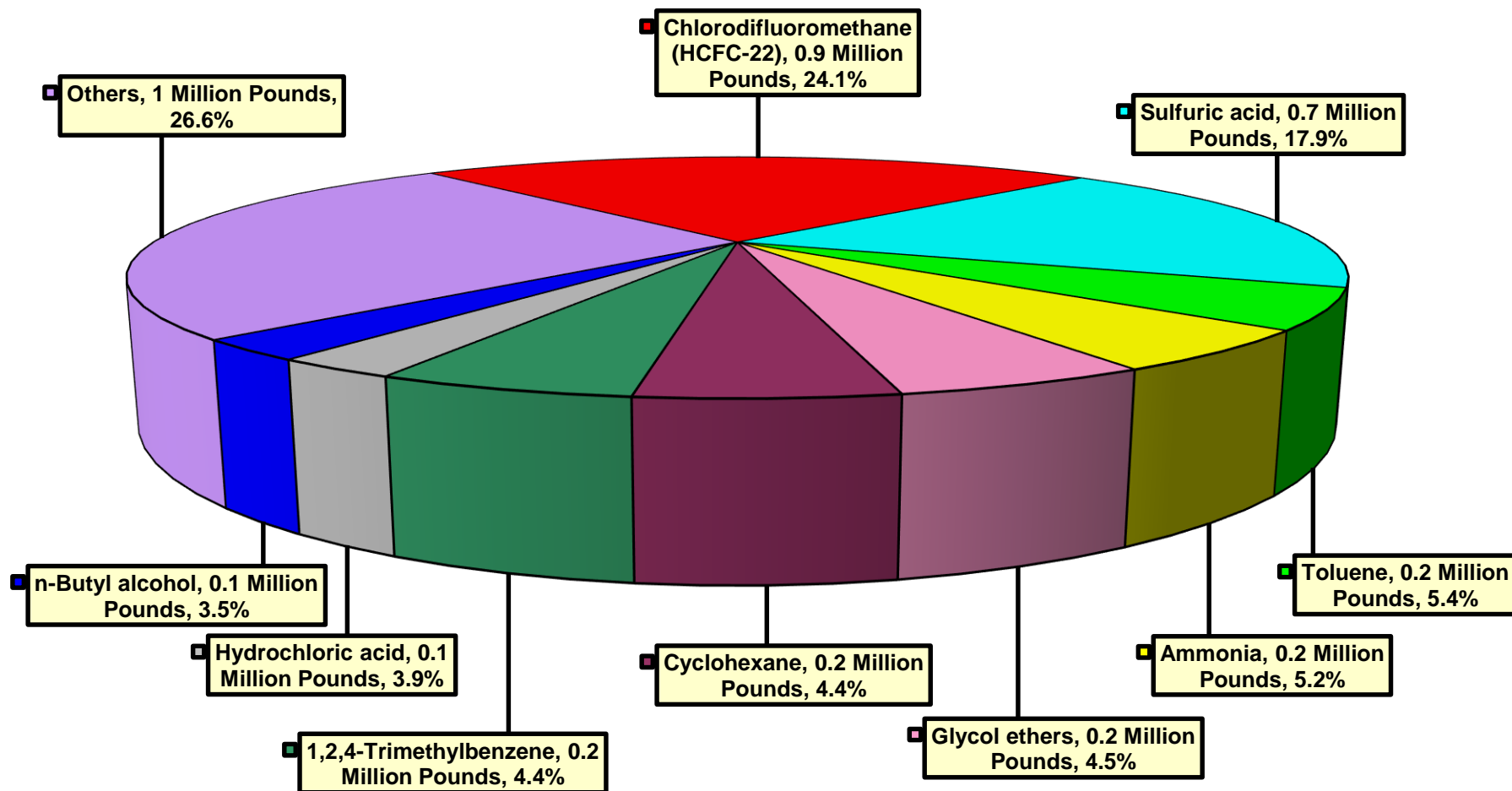
**Distribution of 2016 Jefferson County, KY
Total TRI Releases by Media
3.8 Million Pounds**



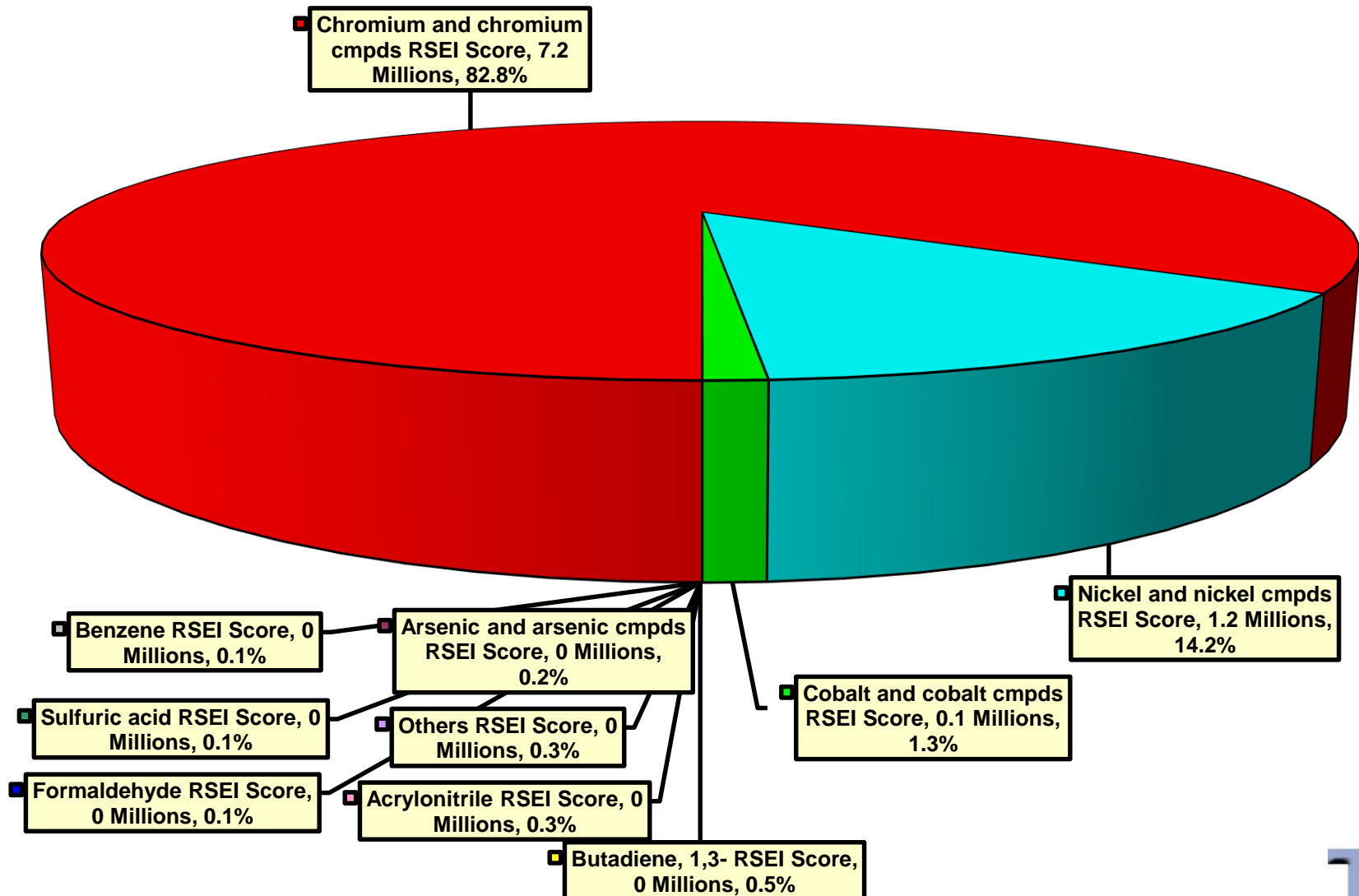
Distribution of 2016 Jefferson County, KY Total RSEI Score by Media



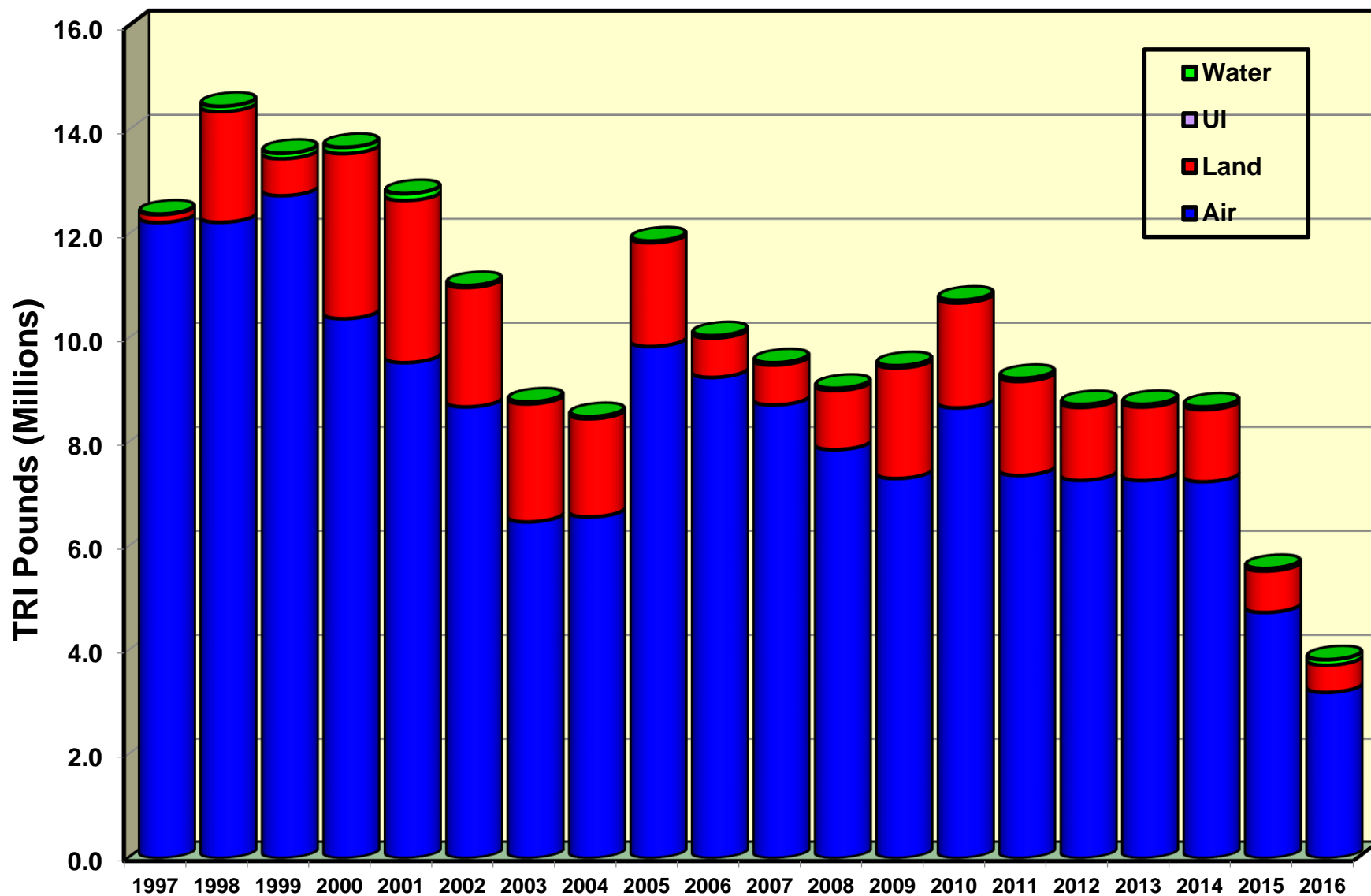
Distribution of Jefferson County, KY Total 2016 TRI Releases by Chemical Total - 3.8 Million Pounds



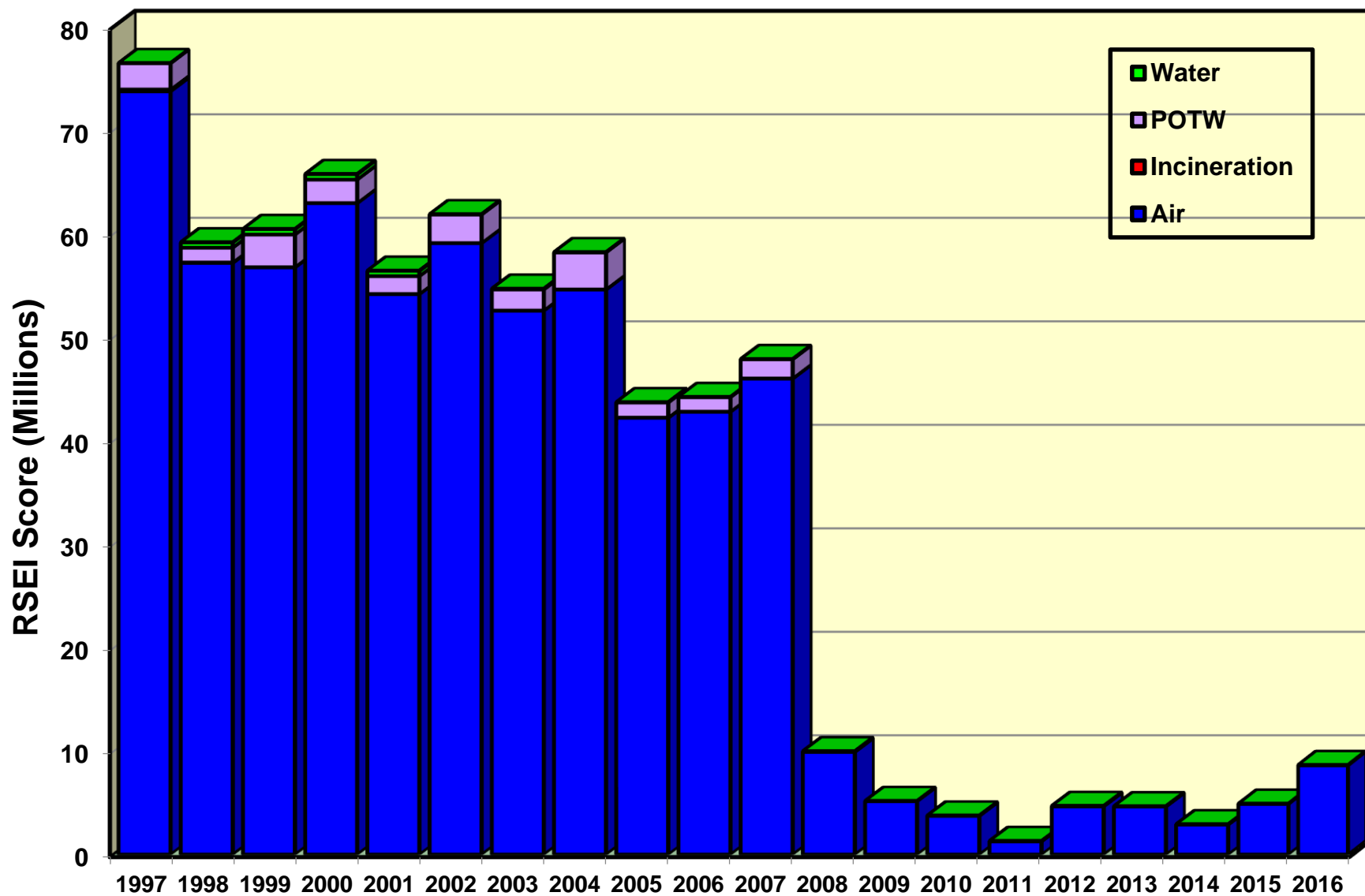
**Distribution of Kentucky
Total 2016 RSEI Score by Chemical
Total - 8.7 Millions**



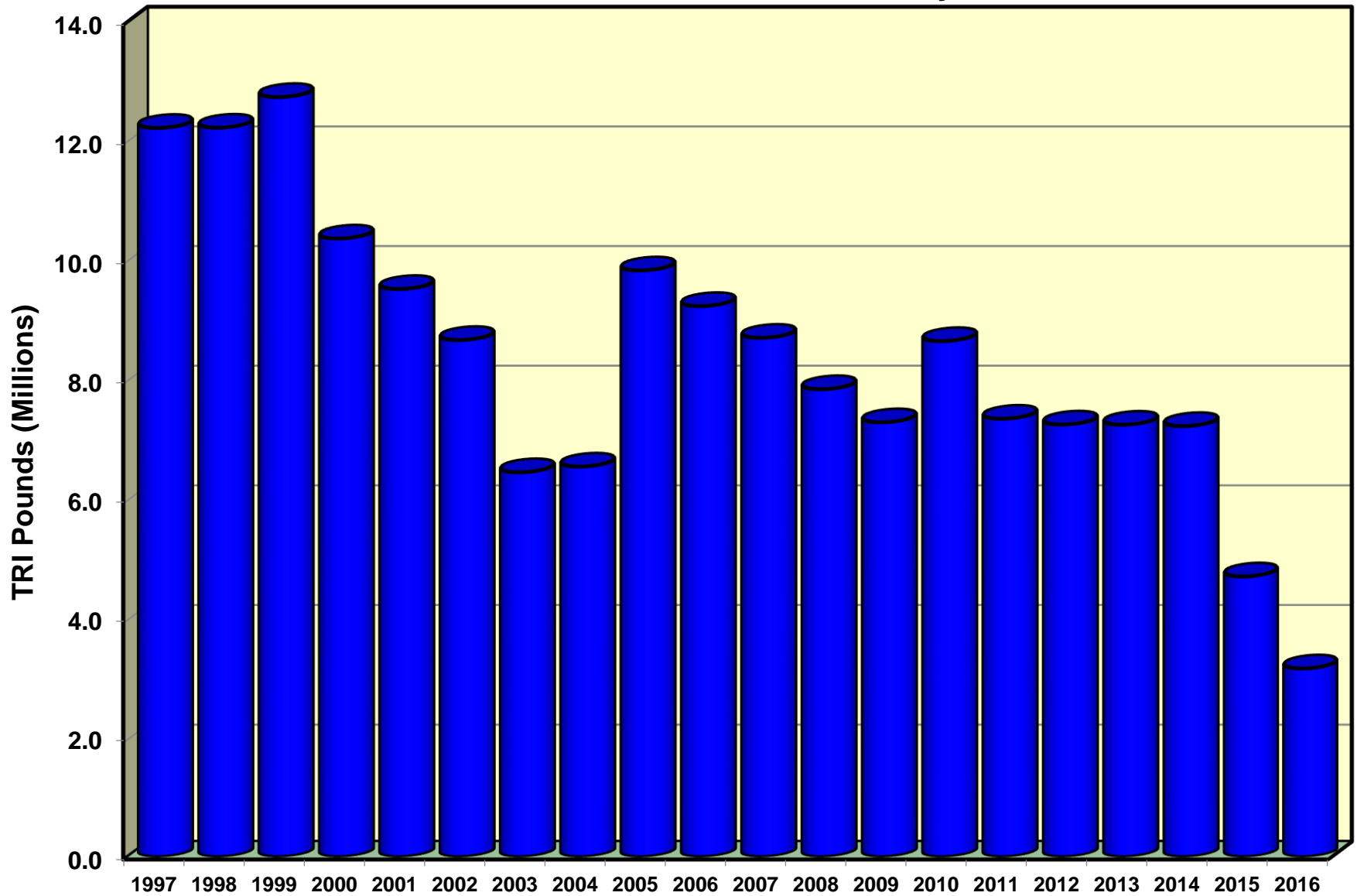
1997 - 2016 Jefferson County, KY TRI Releases by Media



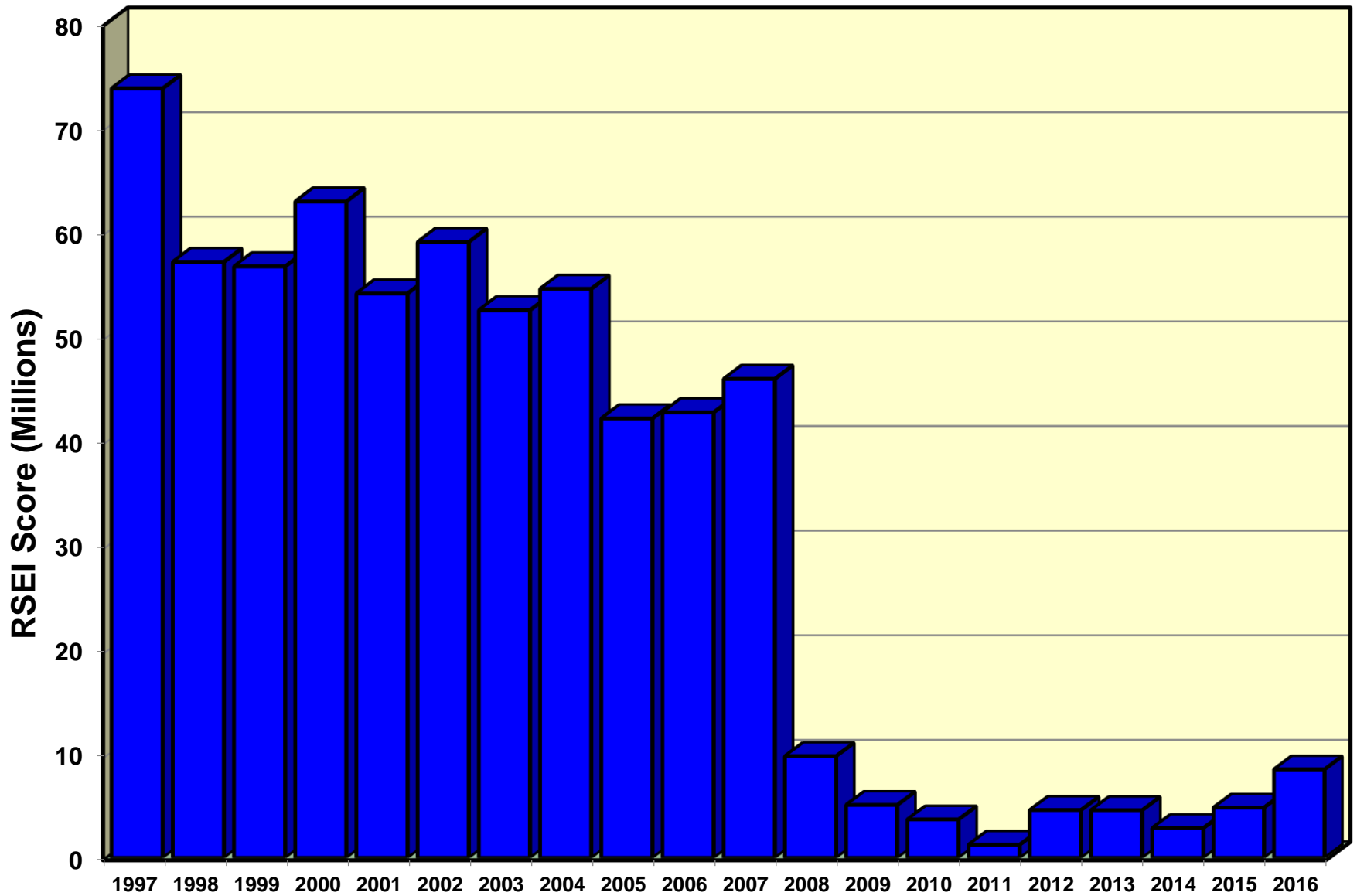
1997 - 2016 Louisville, KY RSEI Score by Media



1997-2016 Jefferson County, KY TRI Air Releases Only



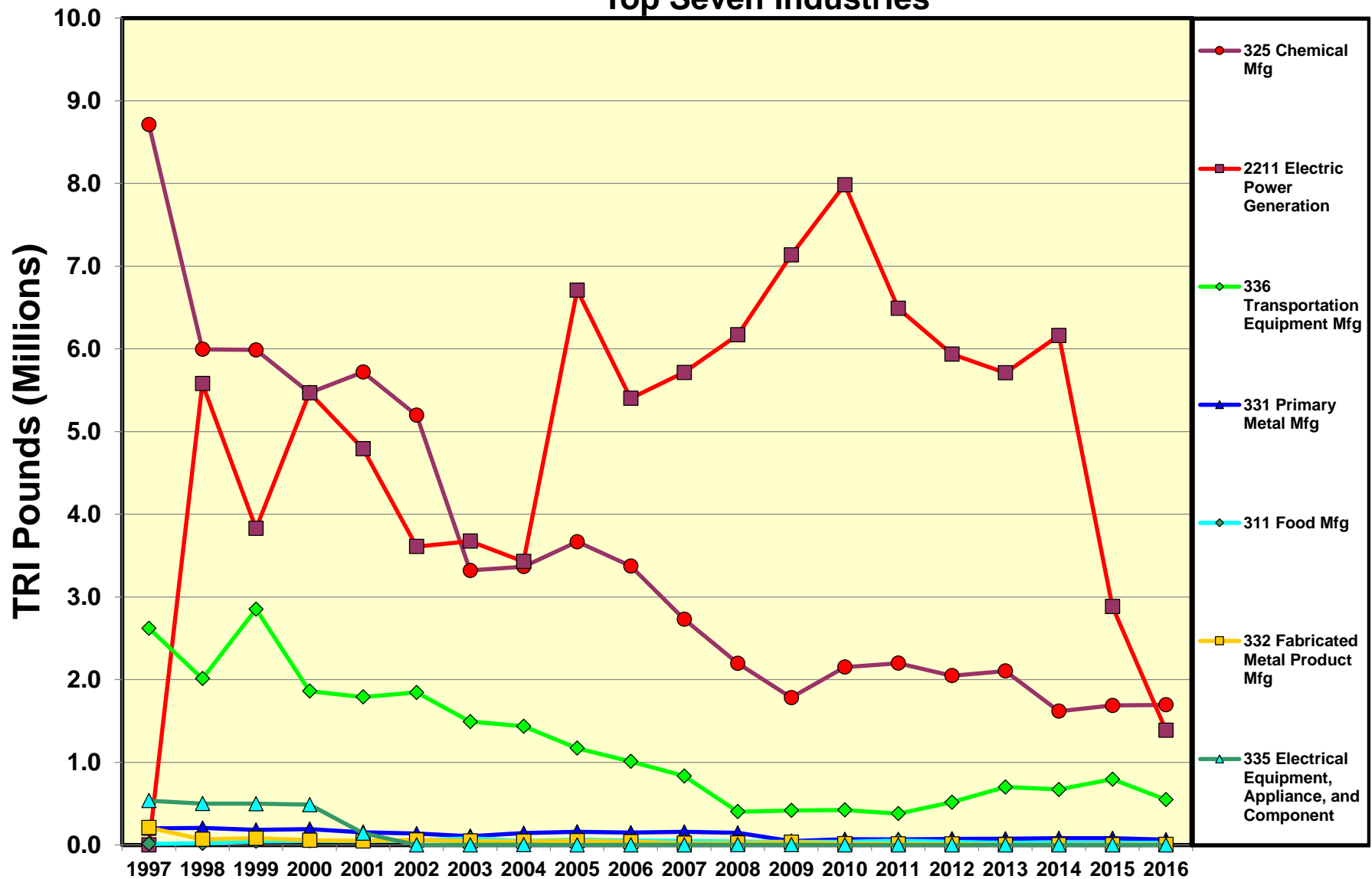
1997-2016 Louisville, KY
RSEI Air Score Only



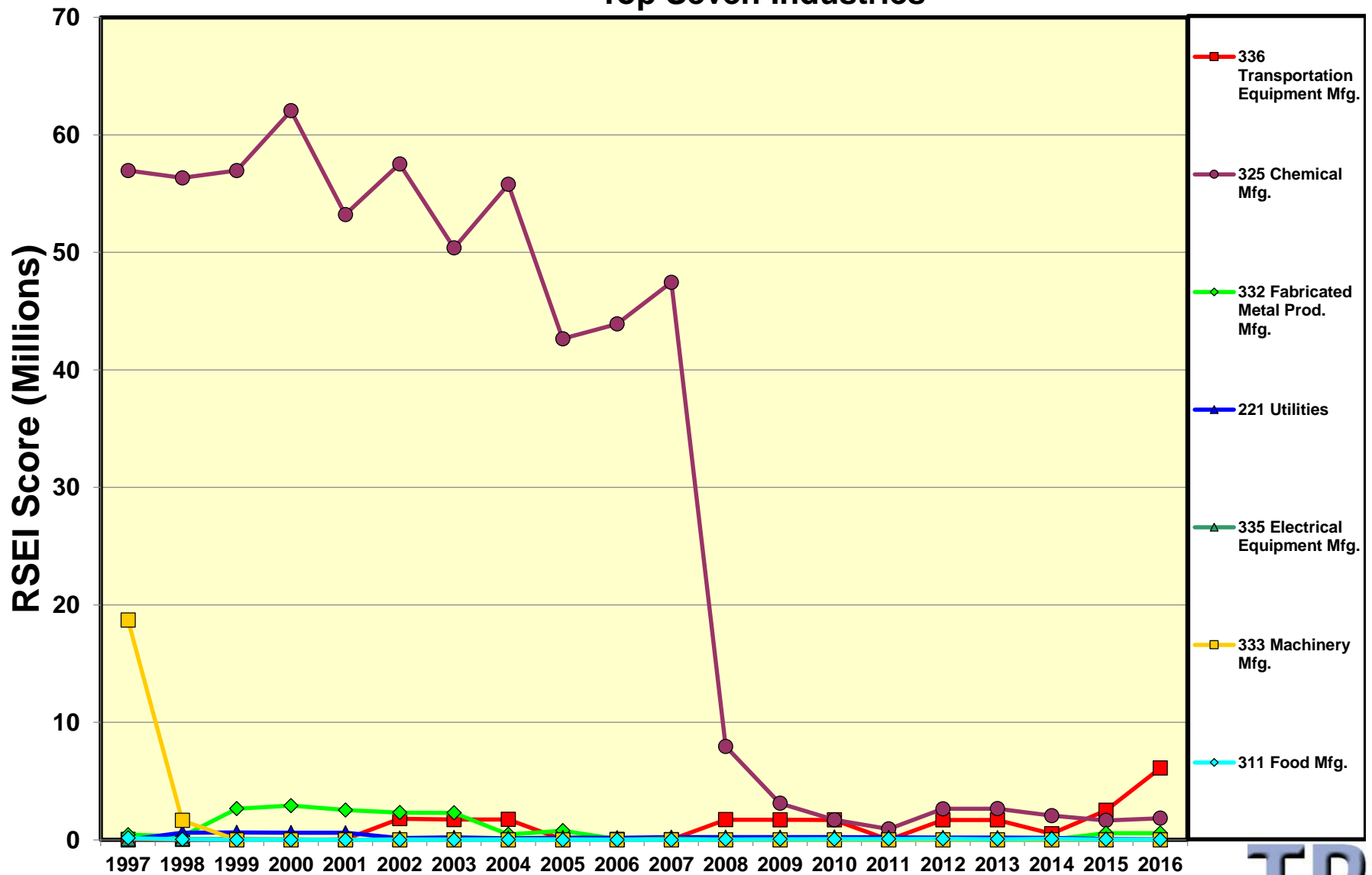
1997 - 2016 Jefferson County, KY

TRI Releases

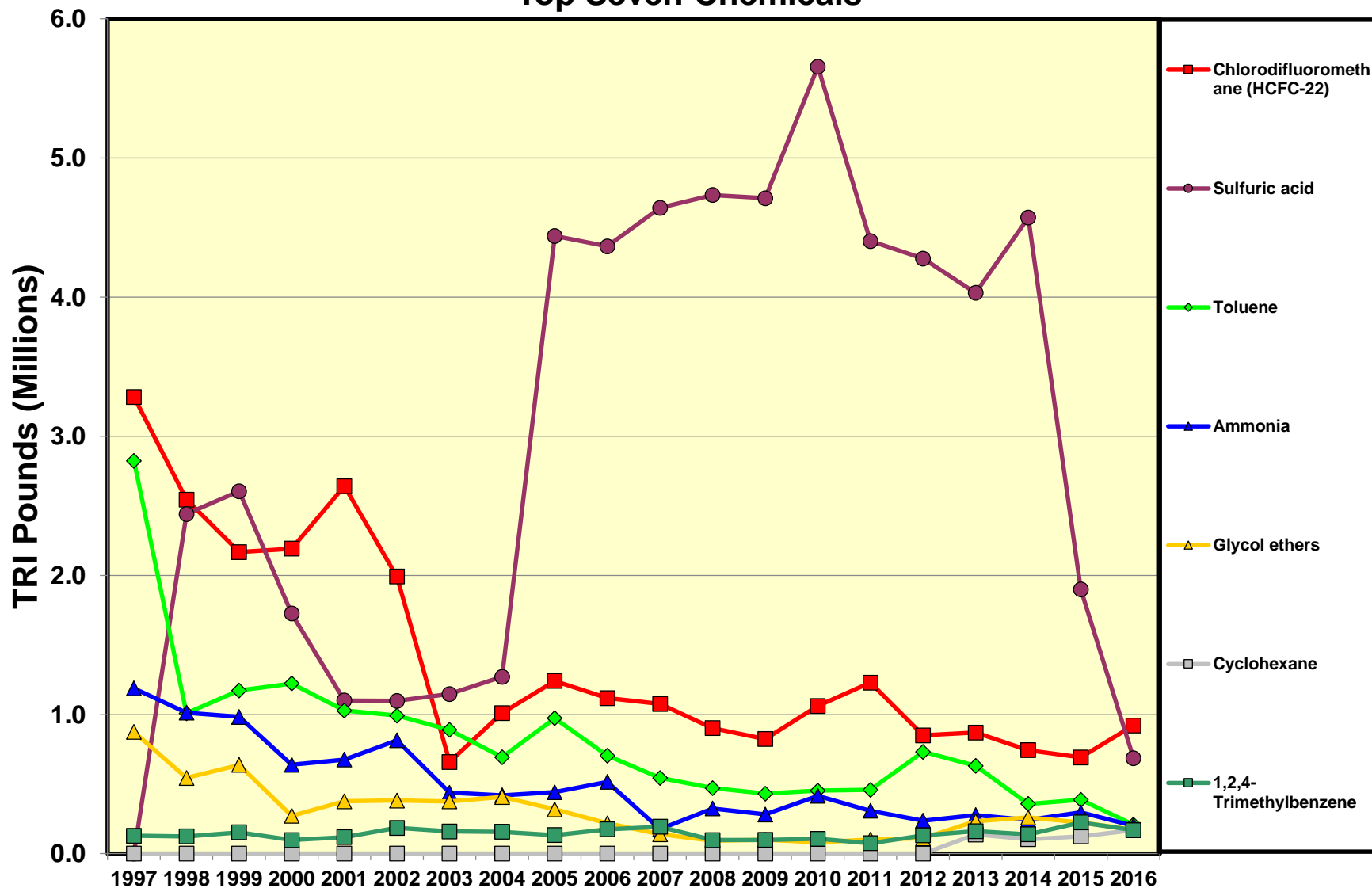
Top Seven Industries



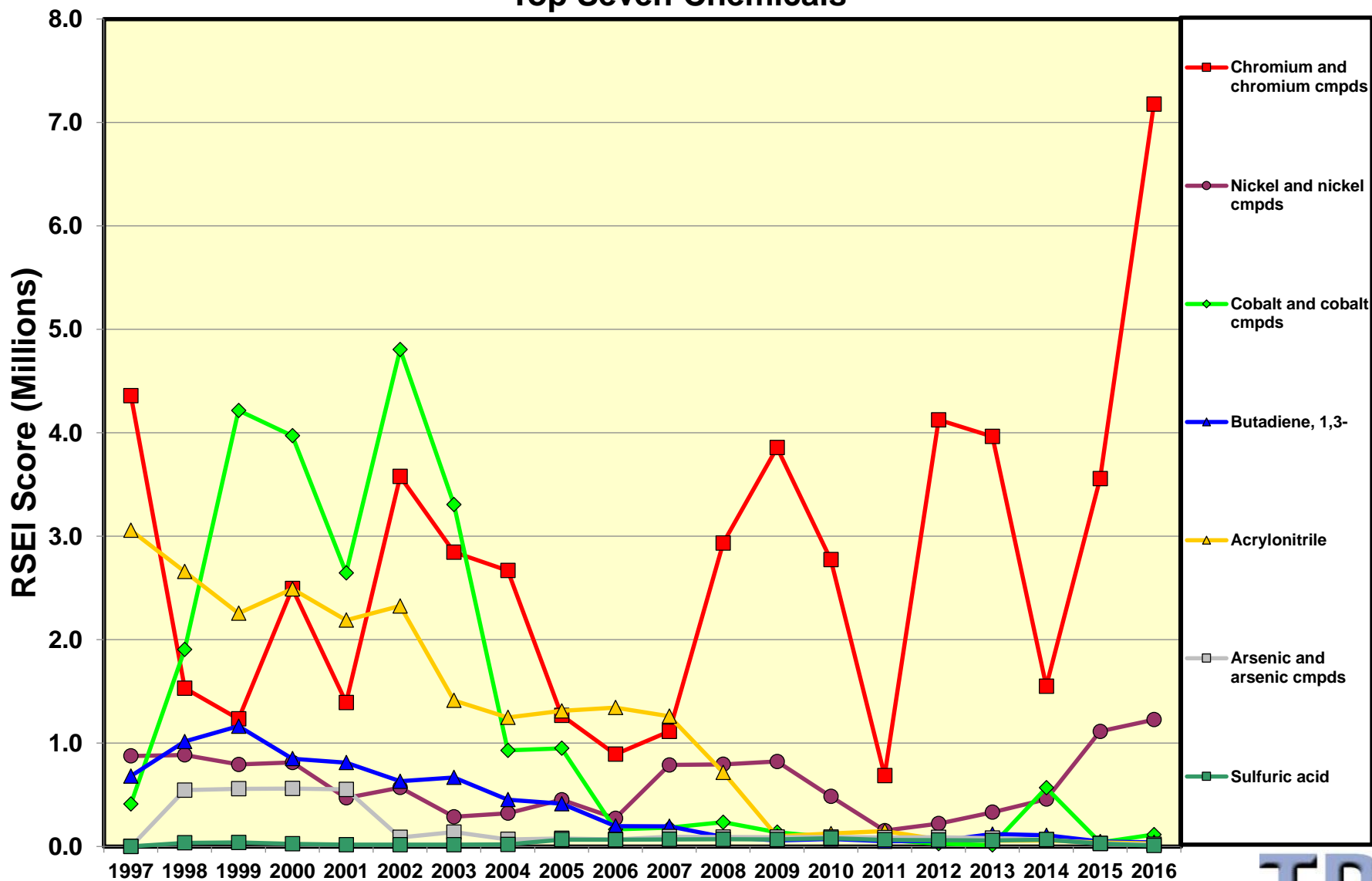
1997 - 2016 Louisville, KY
RSEI Score
Top Seven Industries



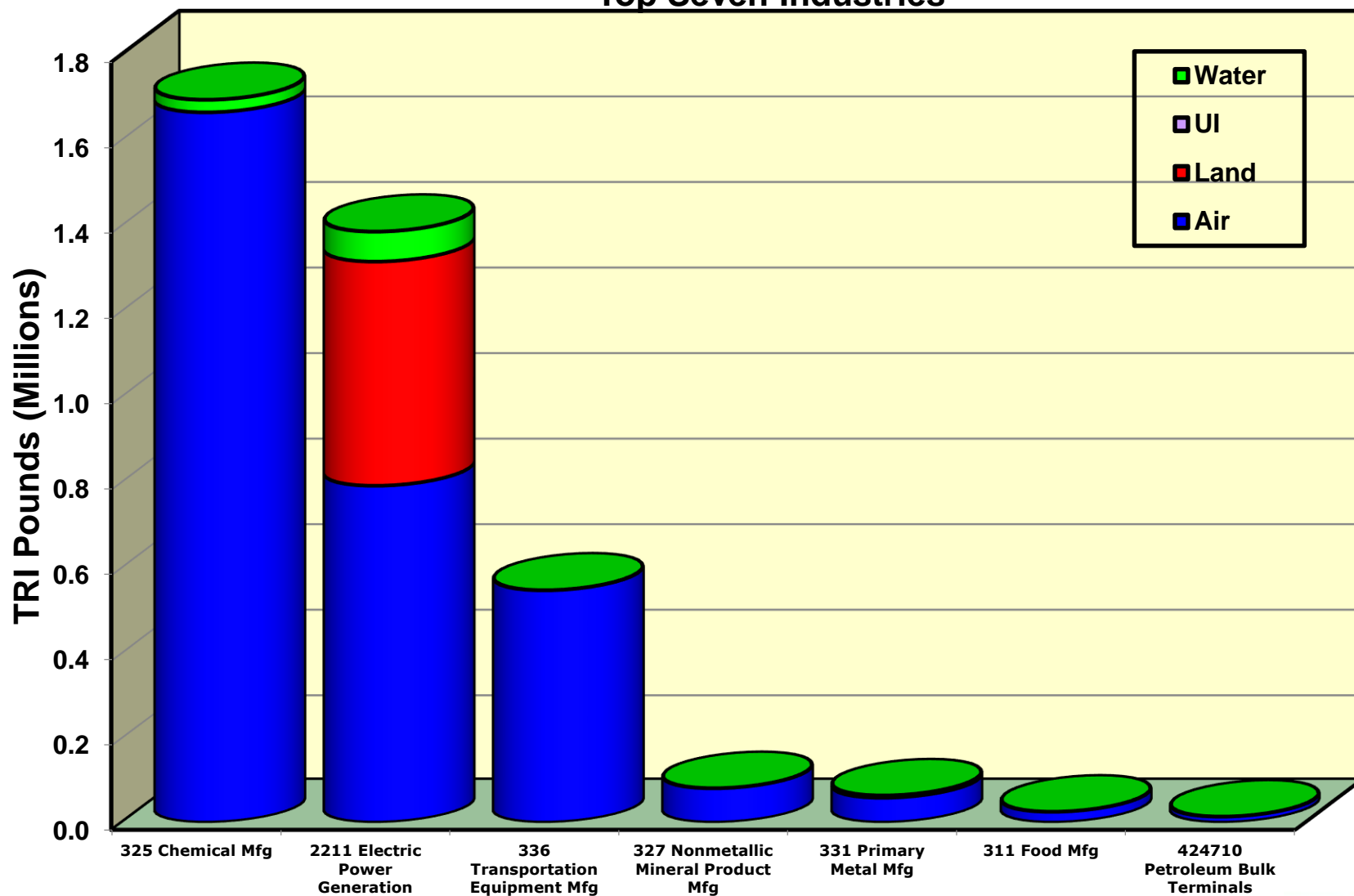
1997 - 2016 Kentucky TRI Emissions Top Seven Chemicals



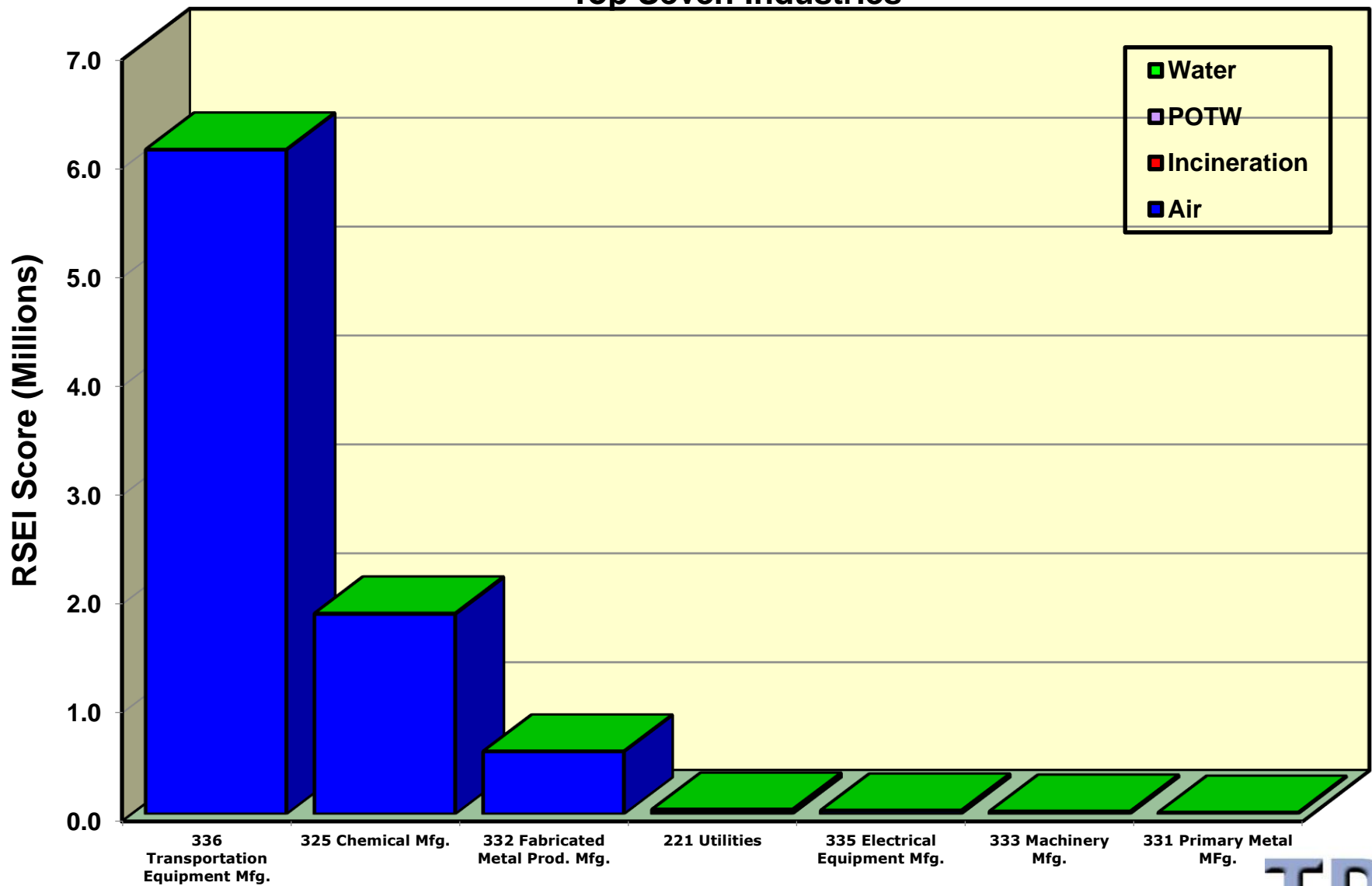
1997 - 2016 Kentucky RSEI Score Top Seven Chemicals



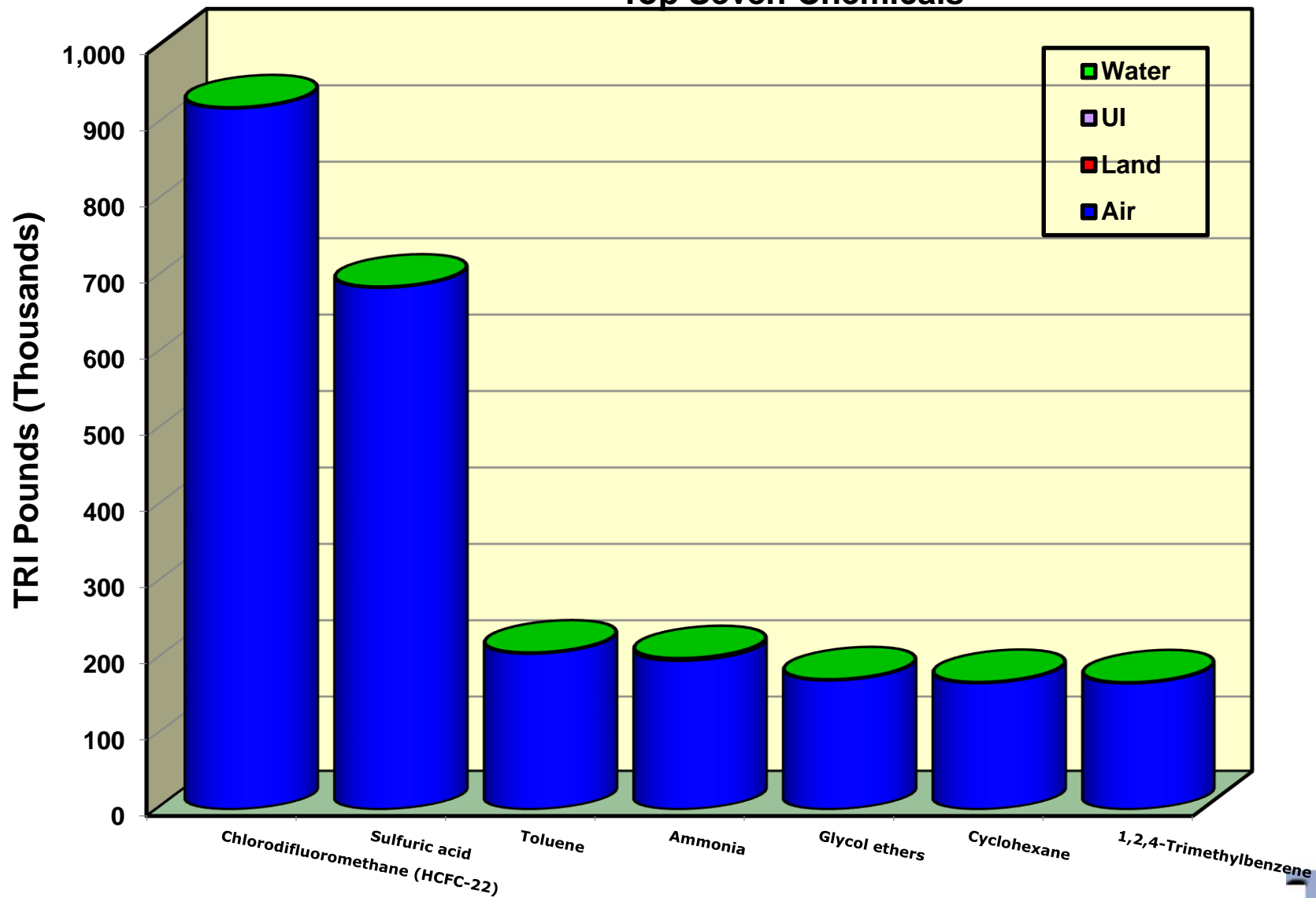
2016 Jefferson County, KY
TRI Releases by Media
Top Seven Industries



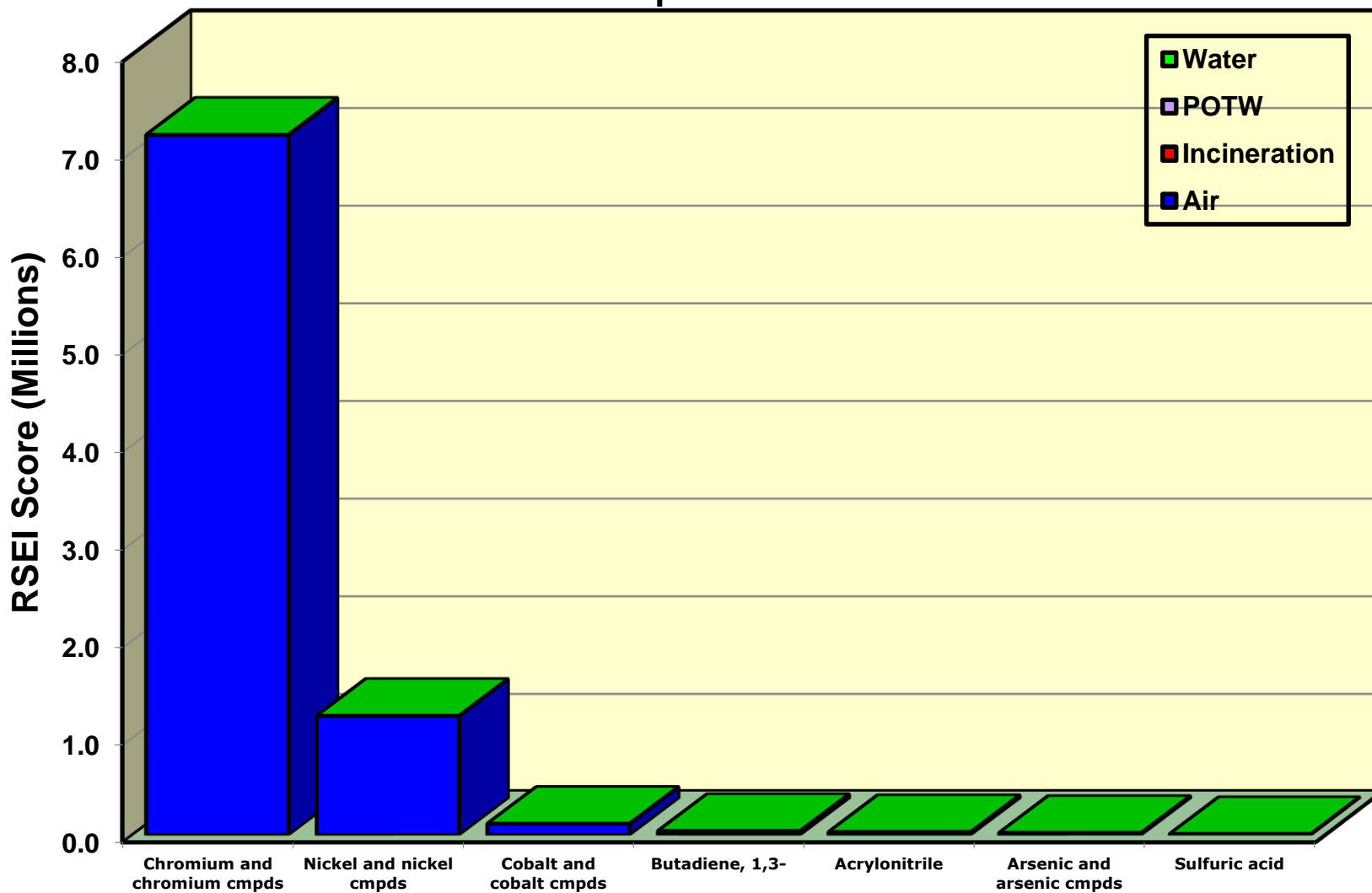
2016 Louisville, KY
RSEI Score by Media
Top Seven Industries



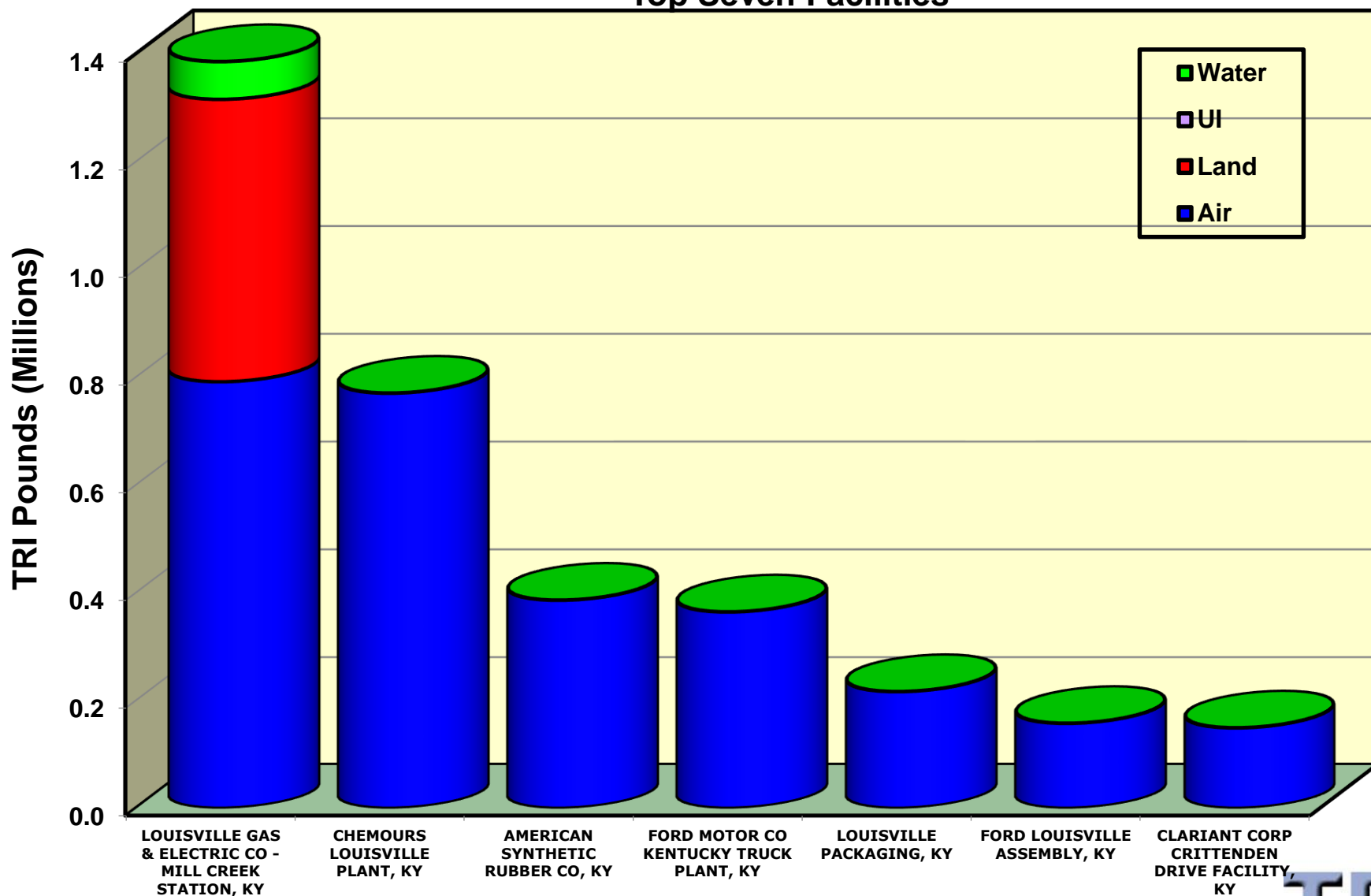
2016 Jefferson County, KY
TRI Pounds by Media
Top Seven Chemicals



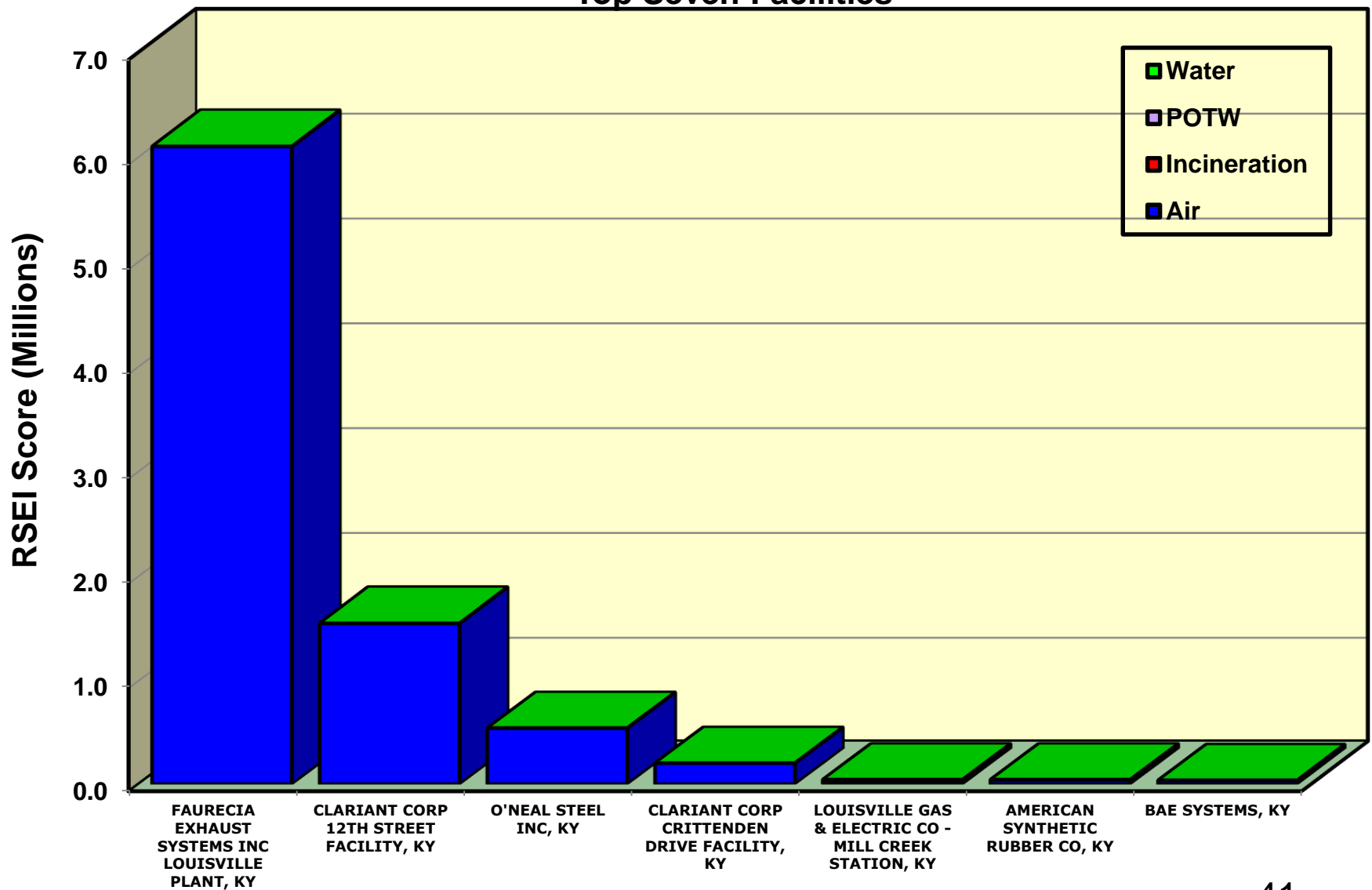
2016 Louisville, KY
RSEI Score by Media
Top 7 Chemicals



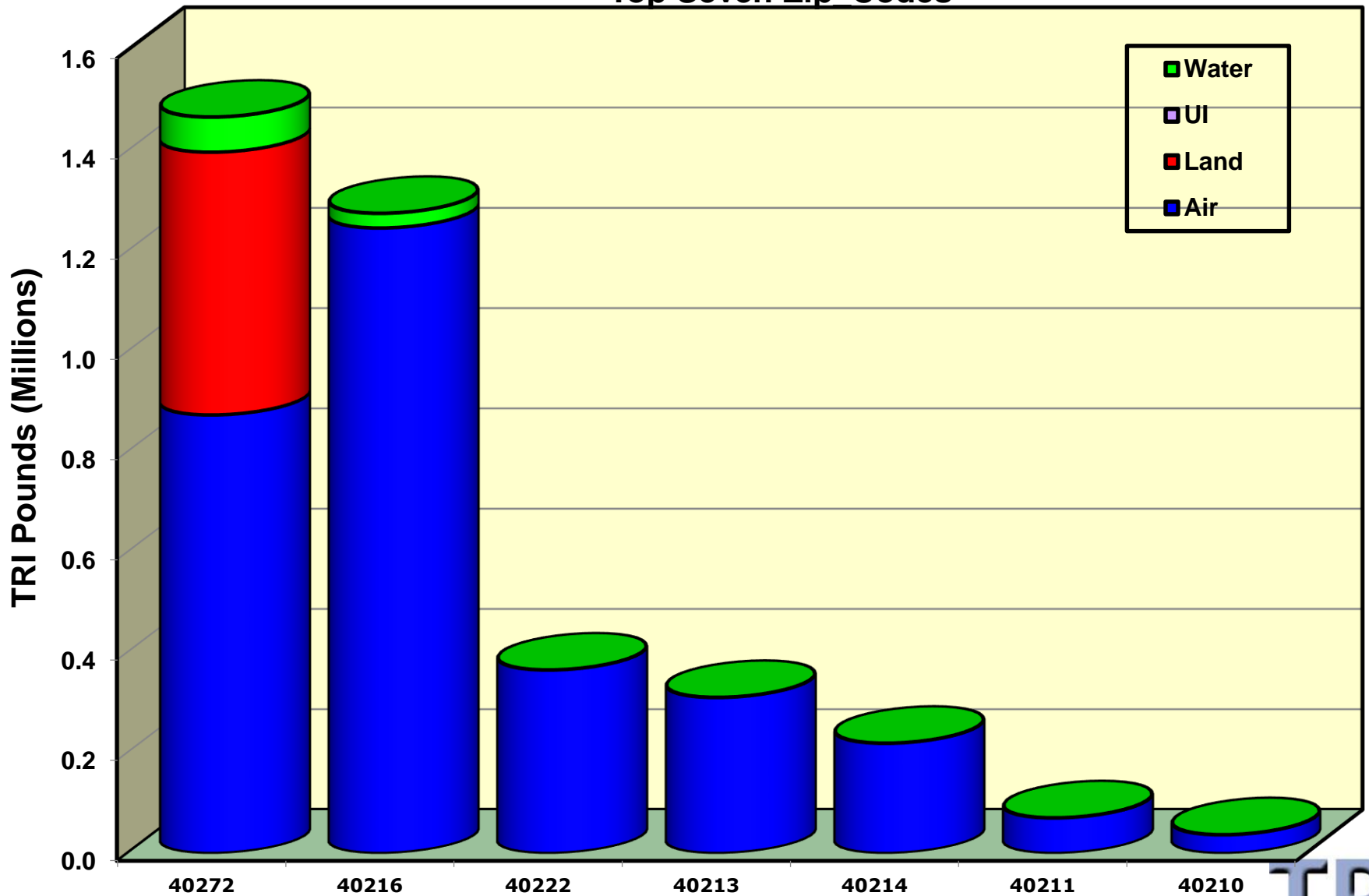
2016 Jefferson County, KY
TRI Releases by Media
Top Seven Facilities



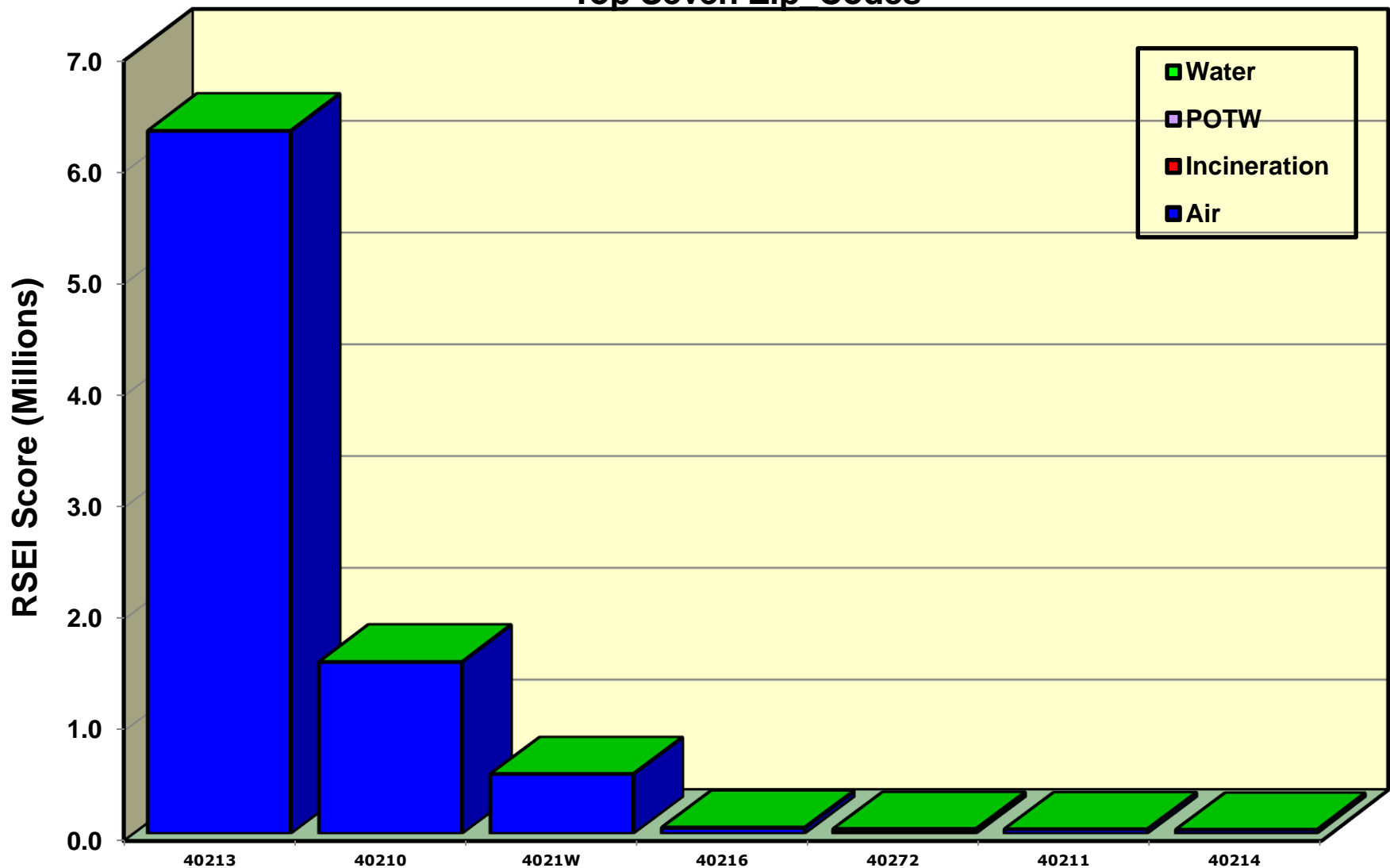
2016 Louisville, KY
RSEI Score by Media
Top Seven Facilities



2016 Jefferson County, KY
TRI Releases by Media
Top Seven Zip Codes





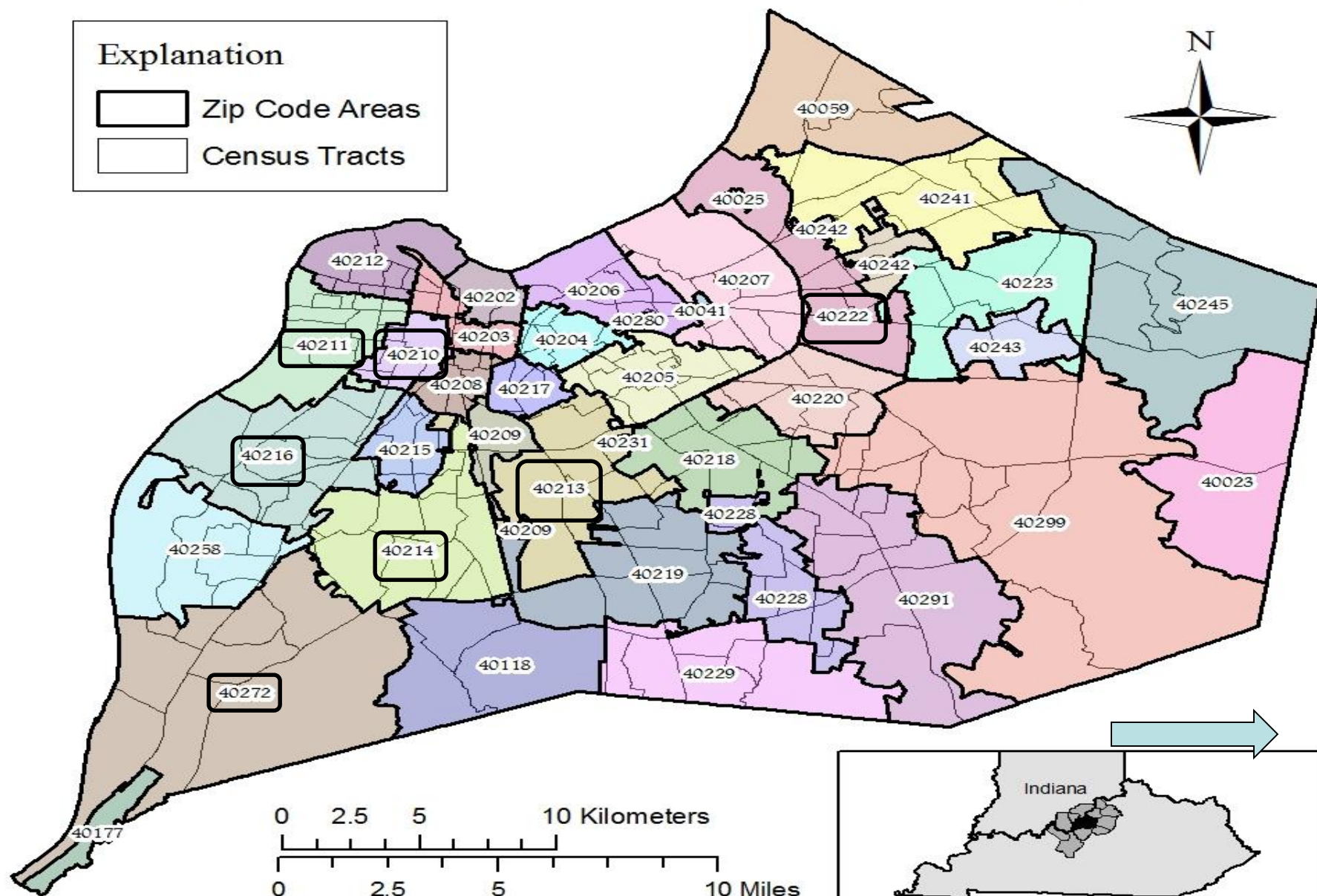
2016 Louisville, KY
RSEI Score by Media
Top Seven Zip Codes



Zip Code Areas and Census Tracts of Jefferson County, Kentucky

Explanation

-  Zip Code Areas
-  Census Tracts



Map Prepared by Lauren M Weaver, 2012.

Data Source: 2012 TIGER/Line Shapefiles.

Location of Jefferson County, KY within the
Louisville Metropolitan Statistical Area



For More Information About TRI

- TRI Home Page
<http://www.epa.gov/tri/>
- TRI Envirofacts Website
<https://www.epa.gov/enviro/tri-search>
- TRI Explorer Website
http://iaspub.epa.gov/triexplorer/tri_release.facility
- TRI Factsheets for Communities
https://iaspub.epa.gov/triexplorer/tri_factsheet_search.searchfactsheet



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